The U.S. Coast Guard Strategy

for

Maritime Safety, Security, and Stewardship

WASHINGTON, D.C.

ON THE COVER: The cover features a picture of the U.S. Coast Guard Cutter *Bertholf* (WMSL 750). The *USCGC Bertholf* is the first-in-class of the multi-mission National Security Cutters to be built under the Integrated Deepwater System program. The *USCGC Bertholf* was christened on Veterans Day, November 11, 2006 and will be delivered to the Coast Guard in 2007 *(Art courtesy of Northrop Grumman)*.

The National Security Cutters will be capable of meeting multiple maritime safety, security, and stewardship mission needs. As the largest and most technically advanced class of cutter in the Coast Guard, they will typically deploy with a versatile complement of high-speed small boats and multi-mission aircraft capable of conducting over-the-horizon operational missions. These cutters will have the ability to carry more fuel, personnel, and provisions than any legacy Coast Guard asset—allowing them to operate throughout the global maritime domain, in support of the nation's maritime and national security interests. Their enhanced command and control and situational awareness capabilities will make them ideal platforms for responding to domestic or international emergencies and will provide the Coast Guard with previously unparalleled interoperability with other military ships and aircraft.

THE COMMANDANT OF THE UNITED STATES COAST GUARD

Washington, D.C. 20593-0001
January 19, 2007

Commandant's Letter of Promulgation

For over two centuries, the U.S. Coast Guard has safeguarded our citizens, secured our maritime borders and served as a responsible steward of the world's oceans. From the early fight against the slave trade, to protection of fur seals in newly acquired Alaska, to the enforcement of Prohibition laws, we have continually confronted asymmetrical, transnational threats.

The challenge is enduring. The threats of the Cold War are gone, and we again find ourselves operating in an environment where piracy, illegal migration, drug smuggling, terrorism, arms proliferation and environmental crimes are carried out by anonymous, loosely affiliated perpetrators. At the same time, the threat of a man-made or natural disaster along our coastline or internal waters demands resiliency. We need response and recovery systems that protect not only the population and critical infrastructure, but the economic lifeline of the Nation as well.

We live in a coastal Nation State that relies on interconnected rivers, lakes, oceans and waterways to feed us, supply us with energy, connect us with the global supply chain, provide us with recreation, and buffer us from those who would do us harm or exploit our scarce resources. We have done much in the wake of the 9/11 attacks and the devastation wrought by Hurricane Katrina to meet the threats, challenges, and vulnerabilities that are converging in the maritime domain. We can do more. It is now time to act collectively … but with strategic intent.

The *Coast Guard Strategy for Maritime Safety, Security, and Stewardship* (CGS) provides the framework and the strategic intent that will guide our actions. It is the U.S. Coast Guard's commitment to the American people to remain *Always Ready* for all hazards and all threats. Built on the foundation of the Coast Guard's Evergreen strategic planning process and its guiding principles, this Strategy aligns with the *National Strategy for Maritime Security* and supports the goals and priorities of the Department of Homeland Security.

This Strategy identifies strategic priorities for implementation across all Coast Guard missions in support of America's maritime safety, security, and stewardship interests. It focuses on enhancements to **legal regimes**, **awareness,** and **operational capabilities** that best position the Coast Guard to defeat the asymmetrical, transnational threats America will encounter in the future. We will work with the Congress, our interagency partners, and our state, local, private, and international partners to bring this Strategy to life. As we stand watch, we will build the 21st century Coast Guard America expects and deserves.

The CGS is our compass. We have plotted the course for the future. America's Coast Guard will be the most capable, adaptive, and responsive multi-mission, maritime and military service in our Nation's history. We will remain *Semper Paratus* to answer the call whenever and wherever America needs us.

THAD W. ALLEN
Admiral, U.S. Coast Guard

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Executive Summary

The U.S. Coast Guard Strategy for Maritime Safety, Security, and Stewardship describes how the U.S. Coast Guard will work to safeguard the nation against all threats, hazards, and challenges in the maritime domain, today and in the future. It discusses the Coast Guard's enduring roles, future challenges and threats, and a systems approach for improving maritime governance. From these foundations, the Strategy presents strategic priorities that build on the Coast Guard's strengths and best focus its capabilities to serve the Department of Homeland Security and the nation.

This Strategy is shaped by the laws, executive orders, international conventions and agreements, and other guidance that determine U.S. maritime policy (Figure 1). It takes significant shape from the National Strategy for Maritime Security (NSMS), the President's Ocean Action Plan (OAP), National and Homeland Security Presidential Directives (NSPD/HSPD), and the Department of Homeland Security goals and priorities. This Strategy is also the product of the Coast Guard's Evergreen Project, which looks across alternative futures to determine robust strategies that best position the Coast Guard and the nation for a changing world.

Figure 1: Policy Environment for the U.S. Coast Guard Strategy

Section I: America's Coast Guard

Maritime safety, security, and stewardship are enduring roles of the Coast Guard. These roles reflect long-standing responsibilities, assigned to the Coast Guard over two centuries of service because they are traditionally governmental, have an essential federal component, and are interrelated such that they can be best accomplished by a single **military, multi-mission, maritime force**.

The Coast Guard's multi-mission character is defined by its ability to conduct distinct yet complementary functions in the maritime domain—law enforcement, national defense, mobility, maritime safety, environmental protection, and humanitarian response. This unique character positions the Coast Guard to meet a broad range of national interests within the maritime domain. The Coast Guard secures the nation's vast maritime border while ensuring the safe and efficient transportation of people and goods. It protects the marine environment and guards natural resources. It defends the nation at home and abroad alongside the other Armed Services. And it saves the lives of those in distress, both at sea and ashore.

The Coast Guard must look to the future and adapt to the changing needs of the nation. The Service's character, forged by its enduring roles of safety, security, and stewardship, has given it three key strengths for meeting tomorrow's challenges:

- *Broad authorities and an expansive network of partnerships*: The Coast Guard's comprehensive authorities combined with its culture of partnership will be key to building layered security and safety systems.
- *Flexible, adaptable operational capability and presence*: Military, multi-mission capabilities, practiced daily throughout the nation's waters and far beyond, can be scaled quickly and effectively to meet all threats and all hazards.
- *Access and relevant expertise within the international community*: Common purpose with the world's maritime forces and a tradition of cooperation within international organizations will enable the Coast Guard to forge global solutions to the global challenges in the maritime domain.

Section II: Challenges and Threats in the Maritime Domain

The United States faces very different challenges and threats from those that defined its national interests during the Cold War. The maritime domain today is shaped by changes that are fueling its productivity and usefulness but also increasing its complexity and vulnerability. While many factors influence U.S. maritime interests, five broad challenges are shaping the strategic direction of the Coast Guard and the nation:

- *The increasing complexity and use of the U.S. Exclusive Economic Zone (EEZ)*: Advances in technology and changing environmental conditions are expanding the use of the Outer Continental Shelf (OCS), the Arctic, and other maritime regions to meet growing demands for commerce, energy, food, resources, and recreation. Growth in activity has increased risks to mariners, communities, and ecosystems, and challenges traditional legal regimes and capabilities for governing the maritime domain.

- *The growth of the global maritime supply system*: Globalization has transformed maritime trade into the key link in the global supply chain that connects a worldwide network of interdependent economies. But as maritime trade has grown in global importance, its system of sea routes and ports has become increasingly vulnerable to disruption.
- *The emergence of transnational threats*: Transnational criminals, pirates, and terrorists seek to exploit the complexity of the maritime domain and the vulnerabilities of the global supply system. Weapons of mass destruction (WMD), contraband smuggling, and small vessel threats, such as water-borne improvised explosive devices (WBIEDs), represent the greatest risks from terrorism in the maritime domain. Today's trafficking of drugs, migrants, and contraband by criminals is becoming increasingly sophisticated and threatening as well. The illegal exploitation of the maritime environment and its resources also challenges the health and sustainability of the oceans.
- *The increasing scale of and potential for catastrophic incidents*: Coastal regions and ports have become heavily developed and densely populated. Catastrophic incidents, whether caused by nature or by a weapon of mass destruction, will have enormous consequences in coastal areas and can disrupt regional and global commerce. Hurricanes Katrina and Rita illustrated the potential scope and scale of such disasters. A related challenge is the enormous size of today's cruise, tanker, and container ships and the "challenge of scale" they present to maritime authorities.
- *The vastness, anonymity, and limited governance of the global maritime domain*: The maritime domain, by its nature, creates its own challenges. Legitimate uses and criminal threats are growing in a realm that spans the globe, has limited governance, and provides little transparency of activity (particularly for smaller vessels). This creates tension between recognized legal regimes and the emerging need for greater security and safety.

Section III: Maritime Governance

The Coast Guard's *Strategy* builds on a 60-year, post-World War II effort to more effectively and efficiently execute its missions in the maritime domain. Recognizing evolving challenges and threats, however, the Coast Guard must think and act anew to safeguard the nation's interests into the future. These past efforts and current initiatives are best understood when viewed as parts of a larger interlocking system of governance comprised of ***maritime regimes, domain awareness, and operational capabilities***.

Regimes are the system of "rules" that shape acceptable activity. Statutes, regulations, and international agreements, conventions, and standards all establish the maritime "rule set." Domain awareness allows for the detection and monitoring of activities using situational awareness and intelligence. Together, regimes and awareness inform decision makers and trigger national action when necessary. Operational capabilities allow authorities to deter, respond to, verify, and counter threats. They also ensure the safe and sustainable use of the maritime domain day-to-day, and speed recovery from natural or man-made disasters in times of crisis.

Laws such as the *Maritime Transportation Security Act* (MTSA), initiatives such as Maritime Domain Awareness (MDA) and recapitalization of Coast Guard platforms and systems through the Integrated Deepwater System program are examples of necessary components within a strong maritime system. Viewing such initiatives as part of a larger system enables a better understanding of their inter-relationships and overall effectiveness. A well designed system of regimes, awareness, and operational capabilities creates overlapping domestic and international safety nets, layers of security, and effective stewardship. These elements, taken together, provide a comprehensive system of maritime governance for the nation.

Section IV: Strategic Priorities for the U.S. Coast Guard

This *Strategy* identifies six cross-cutting priorities for improving the nation's preparedness and advancing U.S. maritime interests. These strategic priorities draw on the Coast Guard's key strengths as a military, multi-mission, maritime service—its authorities and partnerships, flexible operational capabilities and presence, and access and relevant expertise within the international community—to achieve an integrated, systematic approach to maritime governance. Taken together, these strategic priorities best ensure safety, security, and stewardship within the maritime domain, now and into the future:

- *Strengthening regimes for the U.S. maritime domain*: The nation needs a set of coordinated and interlocking domestic and international regimes that increase transparency of activity, reduce risk, and balance competing uses within the maritime domain. Strengthened rules, authorities, and agreements also enable consistent, coordinated action on threats and provide an acceptable framework of standards that facilitate commerce and maritime use. The Coast Guard will work with Department of Homeland Security (DHS), interagency partners, U.S. maritime stakeholders, and the international community to update and strengthen existing maritime regimes and put in place new regimes where needed to address emerging challenges and threats.
- *Achieving Awareness in the Maritime Domain*: The nation needs a greater awareness and effective understanding of maritime activity. This will require greater collection and sharing of data, as well as increased cooperation in fusing, analyzing, and disseminating maritime information. The Coast Guard will work with the Department of Defense (DoD), U.S. interagency partners, state and local governments, the private sector, and the international community to implement the *National Plan to Achieve Maritime Domain Awareness* as intended by the *National Strategy for Maritime Security* (NSMS).
- *Enhancing unity of effort in maritime planning and operations*: The nation must better integrate its operational capabilities and efforts across government and with private sector partners. To support this, the Coast Guard will improve its integrated planning with all partners, its network of command and control centers, and its operational capabilities. In doing this, the Coast Guard will advance unity of

command where possible, and unity of effort at all times. The Coast Guard will also align its operational structure around shore based, maritime patrol, and deployable specialized forces to better allow force packaging and scalable response to all threats and all hazards. This will support the NSMS and its *Maritime Operational Threat Response Plan* (MOTR), as well as the *National Response Plan*.

- *Integrating Coast Guard capabilities for national defense*: The nation needs both U.S. Navy and Coast Guard capabilities along its own coasts, on the high seas, and deployed abroad in support of U.S. national security interests. Coast Guard assets should be ready to serve in support of the Combatant Commanders and the *National Military Strategy* (NMS). To achieve this, the Coast Guard will better integrate its capabilities with DoD and optimize its forces within a Navy/Coast Guard relationship. This will build upon the "National Fleet" model and support the NMS as well as the NSMS and its subordinate plans.
- *Developing a national capacity for Marine Transportation System recovery*: The nation needs a coordinated, integrated approach to planning for and responding to major disruptions in the MTS. To support the NSMS and its *Maritime Infrastructure Recovery Plan* (MIRP), the Coast Guard will leverage its authorities, responsibilities, and capabilities to lead the national planning agenda for assuring the continuity of commerce and critical maritime activities.
- *Focusing international engagement on improving maritime governance*: The nation benefits from strong maritime relationships and capacities around the world, because today's global maritime system ties U.S. interests and welfare to the effective maritime governance of all nations and the global commons. The Coast Guard will focus its international efforts to assist maritime organizations and partner nations in building the sustainable regimes, awareness, and operational capabilities necessary to improve the governance of the global maritime domain.

Section V: The Way Ahead

The Coast Guard has already taken important measures in many of these areas. The Service accelerated efforts to improve the nation's maritime regimes, awareness, and operational capabilities following 9-11. Efforts are also underway to integrate initiatives, build collaboration, and increase unity of effort—as called for by the *National Strategy for Maritime Security*. But much work remains to be done. Gaps in safety, security, and stewardship are broadly recognized, and the Coast Guard and DHS will work with the Executive Branch, Congress and other federal, state, local, private, and international partners to make needed changes. For still other areas, the way ahead will begin with national and international dialogues where maritime stakeholders will help determine the changes that are necessary to improve maritime governance.

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Section I
America's Coast Guard

Since the earliest days of the Republic, the United States has been a maritime nation, tied to the seas for security, commerce, and resources. To sustain its strength, America must protect its maritime borders from unlawful intrusion and uphold its maritime sovereignty. It must ensure the safe passage of cargoes and people on its waters and rescue those in distress. Finally, America must prevent the misuse of the oceans and preserve its marine resources for future generations. The Coast Guard supports these national interests and generates broad public value through its roles of maritime safety, security, and stewardship.[1]

These roles are enduring, long-standing responsibilities, assigned to the Coast Guard over two centuries of service because they are traditionally governmental, have an essential federal component, and are closely interrelated, such that they can be best accomplished by a single, military, multi-mission maritime force.[2] *These roles are also common to, and largely shared by, governments of all seagoing nations. They reflect the mutual national interests of coastal States and their maritime forces around the world.*

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[1] The five goals (maritime safety, maritime security, national defense, maritime mobility, and protection of natural resources) found in Coast Guard Publication 1 and in other previous Coast Guard planning documents have been grouped into maritime safety, security, and stewardship for the purposes of this Strategy. As such, the role of maritime security encompasses both traditional maritime security and national defense activities, and the role of maritime stewardship encompasses activities for maritime mobility and the protection of natural resources. The Coast Guard's eleven mandated mission-programs remain unchanged and fall under the roles of maritime safety, security, and stewardship.

[2] The 1999 Inter-Agency Task Force on the Roles and Missions of the U.S. Coast Guard, established by Executive Order 13115, validated that it was in the best interest of the United States for the Coast Guard to maintain a broad multi-mission character, and concluded that the Coast Guard must recapitalize assets (e.g., the Integrated Deepwater System program) that support all Coast Guard missions. U.S. Department of Transportation, *A Coast Guard for the Twenty First Century: Report of the Inter-Agency Task Force on U.S. Coast Guard Roles and Missions* (Washington, DC: 2001) 4-2 – 4-3.

Maritime Safety

The most basic responsibility of the U.S. government is to protect the lives and safety of its citizens. In addition to the value of lives saved, Coast Guard maritime safety activities minimize damage to property, the environment, and the U.S. economy.

The Coast Guard's Maritime Safety Role

Ensure safe operation of the Marine Transportation System (MTS) and protect the lives and safety of those on the sea.

The Coast Guard will advance the safety of recreational and commercial activities in the maritime domain, using focused prevention and response programs and activities. When incidents do occur, the Coast Guard will lead in rendering aid to those in distress to minimize injury or loss of life and property damage or loss.

Respond to maritime disasters, natural or man made, to protect lives and ensure safety in U.S. communities.

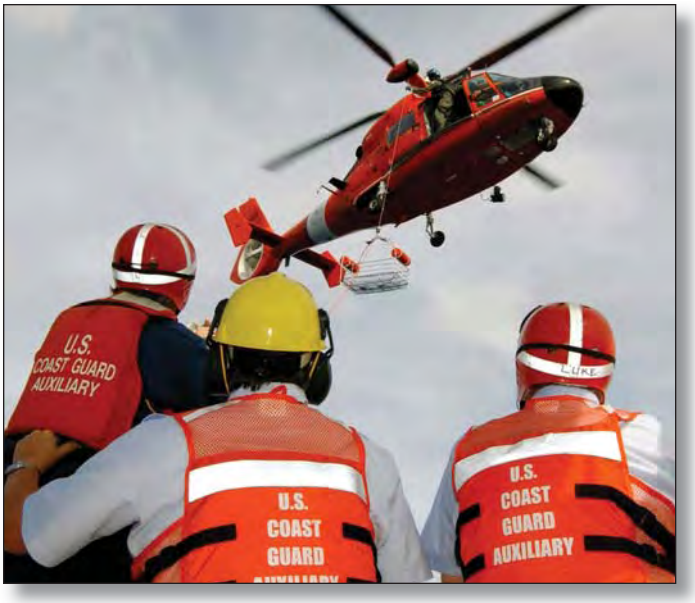
The Coast Guard will prepare for and respond to natural or man-made disasters affecting the U.S. public in concert with other federal agencies, U.S. and foreign military services, state and local governments, private relief organizations, and international agencies.

In partnership with other federal agencies, state and local governments, marine industries, and individual mariners, the Coast Guard advances the safety of maritime communities, trade, transportation, and recreational boating through focused prevention and response programs.

Prevention is founded on domestic and internationally harmonized regulatory regimes[3] aimed at ensuring maritime safety and the efficient flow of commerce. Prevention efforts are developed by virtue of the service's strong maritime expertise, emphasize the human element, and work best when implemented through strong partnerships with the commercial and recreational users of the nation's ports and waterways. Through domestic regulations and programs and active participation in the International Maritime Organization (IMO), the Coast Guard shapes effective maritime safety regimes. Using its broad legal authorities,[4] the Coast Guard enforces safety regimes through inspection of U.S. and foreign vessels and investigation of incidents that occur, with the goal of preventing future marine casualties.

[3] Regimes are defined here as the system of rules consistent with the established legal order (including international law; regional, multinational, or bilateral agreements; domestic laws and regulation; and standard practices and procedures) that shape and define acceptable activity.

[4] Coast Guard conducts safety inspections using legal authorities under Title 14, 33, 46, and 50 U.S. Code for recreational vessels and as Captains of the Port (COTP) and Officers-in-Charge of Marine Inspection (OCMI) for commercial vessels.



The sea is an unforgiving environment where mariners or others may find themselves in distress. As the designated Maritime Search and Rescue (SAR) coordinator under the National SAR Plan, the Coast Guard operates command, communications, and rescue facilities and leads activities that save lives and property. The Coast Guard also engages the world's merchant fleet to rescue mariners in distress worldwide through the Automated Mutual-Assistance Vessel Rescue (AMVER) System. SAR capacity is also instrumental in responding to disasters in coastal and maritime communities, including hurricanes, flooding, maritime casualties, and any other incidents of national significance requiring rescue and assistance. Under its broad Captain of the Port (COTP) authorities and responsibilities, the Coast Guard also coordinates response efforts to ensure public safety and restore commerce on U.S. waterways in the aftermath of mishaps or disasters.

Maritime Security

An essential attribute of any nation is its ability to protect its citizens and to maintain sovereign control of its land, air, and sea borders. In the maritime domain, this means exerting and safeguarding sovereignty in the nation's internal waters, ports and waterways, and littorals, as well as protecting vital national interests on the high seas.

The Coast Guard's Maritime Security Role

Protect the U.S. maritime domain and the Marine Transportation System, and deny their use and exploitation by terrorists as a means for attacks on U.S. territory, population, vessels, and critical infrastructure.

The Coast Guard will work with federal, state, and local agencies and with the private sector to protect the maritime domain, deny its use by terrorists, prepare for and respond to attacks and minimize any consequences, and ensure the continued vitality of U.S. national interests within the maritime domain.

Uphold U.S. maritime sovereignty and enforce U.S. law, international conventions, and treaties against criminal activities.

The Coast Guard will enforce all laws, conventions, and treaties in the maritime domain aimed at suppressing illegal migration, human trafficking, smuggling of drugs and other contraband, and all other federal or international crime. These enforcement actions are integral to national initiatives that secure air, land, and sea borders.

Defend U.S. national interests in the maritime domain against hostile acts through military action.

The Coast Guard will help to defend the United States from direct attacks on its territory through planning and execution of homeland defense, and from threats to its national security through military activities wherever needed.

The Coast Guard works closely with its governmental and non-governmental partners to safeguard America's maritime interests and ensure its maritime sovereignty. Deterring crime on the sea relies on a foundation of strong laws, awareness, and active presence. Patrols, interceptions, and inspections, supported by detection, tracking, monitoring, and operational intelligence, serve to counter contraband smuggling, human trafficking and mass migrations, criminal activities, and terrorist threats. The U.S. Coast Guard also leads in developing security standards and international enforcement agreements, and partners with the private sector to develop effective self-regulatory regimes.

The Coast Guard has long been responsible for protecting ports, harbors, vessels, and waterfront facilities from accidents, criminal acts, terrorism, and sabotage.[5] After the "9/11" terrorist attacks, the Coast Guard took on new authorities as the Federal Maritime Security Coordinator (FMSC) within U.S. ports and adjacent waters.[6] As a result, the Coast Guard is now responsible for coordinating all maritime security planning and operations in the nation's ports and waterways, including efforts to prevent terrorist attacks and to respond as necessary to mitigate the consequences of an attack, should one occur.

As part of the U.S. Armed Forces,[7] the Coast Guard supports the National Security Strategy and related defense strategies. The Coast Guard complements the capabilities of the U.S. Navy, as an essential component of the National Fleet,[8] and operates alongside the U.S. Marine Corps, as it has done throughout the past two centuries. In this capacity, the Coast Guard provides unique, non-redundant support to the military Combatant Commanders, including maritime interception, military environmental response, port security, peacetime military engagement, and coastal sea control.[9]

[5] The Espionage Act of 1917, the Magnuson Act of 1950 (implemented at 33 C.F.R Part 6), and the Ports and Waterways Safety Act of 1972 provide the Coast Guard with broad authorities to protect U.S. ports and waterways.

[6] The Maritime Transportation Security Act of 2002 (P.L. 107-295) designated COTPs as FMSC for their respective zones.

[7] Section 101 of Title 10 U.S. Code defines the term "armed forces" as the Army, Navy, Air Force, Marine Corps, and Coast Guard.

[8] The National Fleet: A Joint Navy/Coast Guard Policy Statement (Washington DC: 2006) developed by the Department of the Navy and the U.S. Coast Guard calls for cooperation and integration of non-redundant and complementary capabilities between the services.

[9] A 1995 Department of Defense-Department of Transportation Memorandum of Agreement identifies specific national defense missions for the U. S. Coast Guard.

Maritime Stewardship

The nation's prosperity relies on the balanced and sustainable use of inland, coastal, and ocean waters and resources. The foundation for this prosperity—an efficient, resilient MTS—must be maintained in order to facilitate maritime mobility and protect the nation's economy. At the same time, the marine environment must be protected against threats from pollution, environmental degradation, the spread of invasive species, and the illegal harvesting of marine resources.

The Coast Guard's Maritime Stewardship Role

Facilitate the economical movement of goods and people through the MTS and maximize access for recreational boating activity.

The Coast Guard will provide navigation systems, information, and services that enable a safe, secure, efficient, effective, accessible, and environmentally responsible MTS for moving goods and people.

Safeguard U.S. marine resources, threatened and endangered species, and the ocean from unlawful acts and environmental degradation.

The Coast Guard will conduct vigorous enforcement against all activities that lead to harming endangered species, over-fishing, ocean pollution, and the introduction and spread of invasive species.

Conduct maritime recovery operations in the aftermath of incidents of national significance, including transportation security incidents, to ensure the continuity of commerce and other critical port and waterway functions.

The Coast Guard will coordinate maritime recovery operations and rapidly restore the functionality of the ports and waterways affected by an incident of national significance or other emergency that significantly impacts the MTS.

Competing demands in America's ports and waterways––commerce, national security, public health and safety, environmental concerns, recreation, fisheries, and more—must be balanced. To achieve this balance, the Coast Guard provides services as well as coordination and leadership among government and private sector partners. Through waterways information and infrastructure, vessel traffic services, aids to navigation, domestic icebreaking, bridge administration, and waterways management activities the Coast Guard helps ensure the nation's waterways remain efficient and safe for commercial and recreational use. These same Coast Guard capabilities are brought to bear in a disaster, natural or man-made, ensuring the quick recovery of waterways and the restoration of essential commerce within U.S. ports. The Coast Guard works across multiple partners towards a common purpose: To ensure that America has safe and reliable maritime gateways to the world.

The Coast Guard, in coordination with other federal and state agencies, enforces marine resource management and protection regimes that preserve healthy stocks of fish and other living marine resources. Fisheries protection requires oversight and presence throughout and beyond the U.S. Exclusive Economic Zone. The Coast Guard patrols these ocean regions to uphold U.S. sovereignty and protect marine resources. The Coast Guard also operates the nation's only polar icebreakers, which provide U.S. capability to advance national interests in the polar regions.

The Coast Guard works to keep the nation's waters free of oil, chemicals, other marine pollution, and invasive species. Prevention strategies are foremost among the Coast Guard's environmental initiatives, but stewardship of the marine environment also requires education, surveillance, interception, inspection, investigation, enforcement, and contingency planning. In the event of a spill, the Coast Guard coordinates response activities as the Federal On-Scene Coordinator (FOSC) for the Coastal Zone.[10] The Coast Guard has built strong partnerships with government agencies, academia, interest groups, private industry, and international organizations to carry out all of these critical tasks.

The Value of a Military, Multi-Mission, Maritime Service

The roles of the Coast Guard have their origins in single-purpose agencies that arose over the last two centuries; the Revenue Cutter Service, Lifesaving Service, Lighthouse Service, Steamboat Inspection Service, and the Bureau of Navigation. The integration of these organizations created a single military, multi-mission, maritime service that is today's Coast Guard.[11] The Service's character, forged by its enduring roles of safety, security, and stewardship, has given it key strengths for meeting tomorrow's challenges:

Broad, Complementary Authorities and an Expansive Network of Partnerships

The Coast Guard's ability to conduct distinct but interrelated maritime functions—law enforcement, national defense, mobility, safety, environmental protection, and humanitarian response—defines its unique multi-mission character and value.[12] The Coast Guard is a member of the U.S. Armed Forces, a law-enforcement and regulatory authority, a member of the U.S. Intelligence Community, and a collaborative-response partner with federal, state, and local agencies. These interactions

[10] Under The National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR Part 300), as required by the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (as amended by the Superfund Amendments and Reauthorization Act of 1986) and by the Clean Water Act (as amended by the Oil Pollution Act of 1990), the Coast Guard is the pre-designated Federal On-Scene Coordinator to direct federal removal efforts at the scene of an oil or hazardous substance discharge in the coastal zone.

[11] U.S. Department of Transportation, Coast Guard Publication One, U.S. Coast Guard: America's Maritime Guardian (Washington, DC: 2002), 56-63.

[12] Recognizing the value of maintaining the military, multi-mission nature of the Coast Guard, Congress transferred the service intact with its full complement of missions to the Department of Homeland Security as per Section 888(a) (2) of the Homeland Security Act of 2002.

generate strong civil-military partnerships and networks that cover all facets of maritime activities, at home and abroad. The Coast Guard has broad jurisdictional authorities to combat nearly every maritime threat, hazard, or challenge to the nation. The Coast Guard also works extensively with public and private partners to coordinate planning for and response to maritime emergencies.

These wide authorities and partnerships yield advantages in today's maritime domain. Layered security and overlapping safety systems are key concepts in many national strategies.[13] Layers of security are built by addressing each point of vulnerability—e.g., people, cargo, conveyances, facilities, transportation routes, and more. Layering is also achieved through: "hardening" of facilities and infrastructure against natural disasters and man-made attacks; military and law-enforcement operations; commercial practices; international standards; and other steps. Using its broad authorities and extensive partnerships, the Coast Guard can coordinate law enforcement, intelligence, military, diplomatic, and private sector activity into a comprehensive, mutually reinforcing system of "layers."

Flexible, Adaptable Operational Capability and Presence

The Coast Guard's military, multi-mission, maritime character provides agile, adaptable, and ready operational capabilities that are well suited to serve the nation's maritime interests. The majority of the U.S. population lives near the seacoasts and a diverse range of activities—shipping, fishing, energy exploration, exploitation of other natural resources, and recreation—are conducted within the Exclusive Economic Zone. These regions also contain much of the critical infrastructures and many of the key economic assets that enable the United States to sustain its economy and reach out globally to overseas markets. In this land-sea "ribbon" around the nation, the Coast Guard provides a constant, credible, and recognized maritime presence in the performance of its safety, security, and stewardship roles.

This presence, supported by a military command, control, and communications network, allows the Coast Guard both to prevent threats and respond to natural disasters and man-made emergencies. The Coast Guard can scale forces with essential expertise, from purely local actions up to a national- or even international-level response, regardless of the danger. The Coast Guard's response to the terrorist attacks of 9/11 and Hurricanes Katrina and Rita demonstrated the Service's surge capacity and response capability.[14] In responding to domestic disasters and emergencies, the Coast Guard can also accept and integrate assistance from the U.S. Armed Forces.

The Coast Guard also has capability, experience, and expertise for homeland defense and overseas missions, including expanded maritime interception operations in support of the Global War on Terrorism. The Coast Guard can flow its non-redundant capabilities to the Department of Defense for national security contingencies. As both a military service and law-enforcement agency, it straddles the seam separating the federal government's homeland security and homeland defense missions. Regardless of whether a maritime threat requires law enforcement or a military response, the Coast Guard, because of its military, multi-mission character, can respond appropriately.

[13] "Deploy layered security to unify public and private security measures" is one of the five strategic actions of The National Strategy for Maritime Security. Department of Homeland Security, National Strategy for Maritime Security (Washington, DC: 2005), 20. The Department of Defense's Strategy for Homeland Defense and Civil Support states: "Guiding homeland defense planning is the concept of an active, layered defense, predicated on seizing the initiative from adversaries." Department of Defense, Strategy for Homeland Defense and Civil Support (Washington, DC: 2005), 10.

[14] *The Federal Response to Hurricane Katrina: Lessons Learned* highlights the value of the Coast Guard's surge capability as a military organization: "DoD…demonstrated that along with the Coast Guard, it was one of the only Federal departments that possessed real operational capabilities to translate Presidential decisions into prompt, effective action on the ground." The White House, *The Federal Response to Hurricane Katrina: Lessons Learned* (Washington, DC: 2006), 54.

Access and Relevant Expertise within the International Community

The Coast Guard has long provided the United States with the ability for international engagement in maritime affairs. The Coast Guard's military, law enforcement, and humanitarian functions—all blended into a single maritime force—closely resemble those of the vast majority of the world's navies and coast guards in terms of structure, capabilities, and missions. This promotes instant understanding and interoperability and makes the Coast Guard a useful "match" for many important naval and maritime partners.

The Coast Guard's white-hulled cutters with their orange and blue "racing stripes" demonstrate U.S. interest, resolve, will, and commitment to shared maritime objectives. The Coast Guard has access to multiple ministries of a country, such as transportation, interior, security, justice, defense, and environment. This opens many doors for enduring relationships, building upon common interests in maritime administration, humanitarian, environmental, and law-enforcement missions, in addition to "military-to-military" exercises and operations. The Coast Guard has a long history of providing international training to maritime forces around the world, improving the capabilities of partner nations and promoting operations that support common interests. The Coast Guard's effectiveness in international affairs also stems from its recognized leadership in multi-national forums and institutions where the Coast Guard has long advanced maritime safety, security, and stewardship standards.

Section II
Challenges and Threats in the Maritime Domain

The Coast Guard's "world of work" is the seas, lakes, rivers, harbors, and coastal communities of this nation, as well as the oceans and marine transportation system that connect America to the global economy. This "world" is being shaped by changes that are fueling its productivity and usefulness but also increasing its complexity and vulnerability. While these challenges and threats are numerous and complex, five broad "driving forces of change" are shaping the strategic direction of the Coast Guard and the nation.

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Increasing Complexity and Usage of the U.S. Exclusive Economic Zone

The U.S. EEZ covers over 3.4 million square nautical miles of ocean territory and is among the most valuable and productive natural resources on Earth. In 2000, offshore activities contributed more than $117 billion and two million jobs to American prosperity, while the overall economic activity of the coastal areas totaled over $1 trillion, creating one-tenth of the nation's annual gross domestic product.[15] Use of the EEZ is growing for maritime trade, recreation and tourism, commercial and recreational fishing, energy development, and sea-bed mining. Advancing technologies, and in some cases climate change, are reshaping these maritime activities and allowing them to expand throughout the EEZ. These increasing and sometimes competing uses will challenge the safety, security, and health of the maritime environment.

Outer Continental Shelf Development

Domestic energy supplies and industry in the U.S. Outer Continental Shelf (OCS) provide a major source of revenue as well as generating tens of thousands of U.S. jobs. About 30% of the nation's oil supplies and 25% of its natural gas supplies are produced from offshore areas, and new advances in technology will allow production to occur in deeper waters.[16] During the past several years, discoveries of huge reserves of oil and gas in the deeper waters of the Gulf Coast OCS have already increased the amount of drilling in these areas. This can be expected to drive larger and more complex platforms, increased pipeline infrastructure, a larger offshore workforce, and increased surface and subsurface movement of oil and gas. All of these developments will be coupled with issues of foreign ownership, operation, crewing, and supply chains—factors that are not fully addressed in current regimes for governance.[17]

The demand for natural gas and the desire for future renewable sources of energy are increasing in the United States. While in early 2007 the U.S. has only six operating Liquefied Natural Gas (LNG) marine terminals, new terminals are in various stages of planning. These and other terminals may be built on the OCS under the *Deepwater Port Act*, adding critical offshore infrastructure but at the same time bringing related safety and security concerns.

The EEZ also represents significant potential as a source for renewable energy using wind turbines, ocean thermal energy conversion technology, and mechanical devices driven by waves, tides, and currents. While sometimes controversial, renewable energy infrastructure illustrates the broad pressure to develop and extract energy from the EEZ.

[15] U.S. Commission on Ocean Policy, *An Ocean Blueprint for the 21st Century*. (Washington, DC: 2004), 2.

[16] Ibid., 6.

[17] For the purposes of this document, maritime governance means the use of institutions, structures of authority, and sovereign capabilities to oversee maritime activities and safeguard national maritime interests.

Other Increasing and Competing Uses

The EEZ supports a wide range of activities, such as navigation and transportation, contains a complex network of infrastructure, and is the nation's gateway to the global supply chain. It is also used by tens of thousands of recreational boaters and a rapidly expanding ocean tourism sector that drive U.S. coastal economies. The EEZ is home to an increasing number of marine sanctuaries designed to conserve critical ocean ecosystems. U.S. fish stocks are harvested by recreational and commercial fisherman in a $48 billion annual industry.[18] Technologies for unearthing deep sea-bed mineral resources are also improving, enabling mineral extractions from increasingly deeper waters in the EEZ. These trends, combined with OCS development, add complexity and vulnerability in the maritime domain. The growth in EEZ activities is remarkable and needs to be matched by the development of comprehensive, integrated, and non-conflicting rules necessary to address the safety, security, and stewardship concerns of the nation.

The Future of the Arctic

Scientific evidence indicates that the Arctic ice cap has shrunk by nearly half since the early 1950s, suggesting that an oceanic trade route across the Arctic from the North Atlantic to the North Pacific will eventually become reality. Such a trade route would represent a transformational shift in maritime trade, akin to the opening of the Panama Canal in the early 20th Century. An Arctic marine highway would cut existing oceanic transit by an estimated 5,000 nautical miles or up to one week of sailing time. Further, experts believe that one-quarter, if not more, of the world's oil and natural gas resources may lie in the Arctic, creating significant offshore-energy production opportunities as the ice melts.[19]

While transportation and energy developments in the Arctic could be critical to future national interests, the Arctic represents an especially complex and ecologically sensitive oceanic area. Navigation practices and traffic schemes, vessel standards, environmental protection, and enforcement and response capability unique to the environment are just a short list of sovereignty and maritime governance issues that must be addressed.[20]

[18] Ibid., 6.

[19] Scott Borgerson, "Breaking the Ice Up North," *New York Times*. October 20, 2005.

[20] The National Research Council has noted, "The potential for increased human activity in the northern latitudes will likely increase the need for the United States to assert a more active and influential presence in the Arctic to protect not only its territorial interests, but also to project its presence as a world power concerned with the security, economic, scientific and international political issues of the region." National Research Council, *Polar Icebreakers in a Changing World: An Assessment of U.S. Needs* (Washington, DC: 2006), S-2.

Growth of the Global Maritime Supply System

In 2001, merchant vessels carried approximately 80% of world trade by volume.[21] The United States is the world's leading maritime trading nation, accounting for nearly 20% of the annual world ocean-borne overseas trade.[22] The global Marine Transportation System—a complex and interconnected system of waterways, ports, terminals, inter-modal connections, vessels, people, support service industries, and users spanning the domestic and international public and private sectors—is the economic lifeblood of the global economy and is critical to U.S. national interests. Nearly 700 ships arrive in U.S. ports each day, and on the order of 8,000 foreign-flag ships, manned by 200,000 foreign mariners, enter U.S. ports every year.[23] Annually, the nation's ports handle more than $700 billion in merchandise, while the cruise industry and its passengers account for another $11 billion in spending. All told, the U.S. MTS supports a global chain of economic activity that contributes more than $700 billion to America's economy each year.[24]

Vulnerabilities to Disruption

As the MTS has grown in global importance, it has also become more vulnerable. The majority of freight moving by sea is shipped for "just-in-time" delivery—a means for reducing inventory and lowering operating costs for industry. As a result, the MTS operates within tight tolerances and has limited ability to deal with disruptions.

Global maritime trade moves through a small number of major trading nodes, often referred to as mega-ports, and through a handful of strategic maritime chokepoints. Spread across Asia, North America, and Europe are 30 mega-ports that constitute the world's primary, interdependent trading web. Similar critical shipping nodes exist within the U.S. MTS. Out of the some 326 ports nationwide, ten handle 85% of all ship-borne containerized cargo.[25] These nodes are connected by trade routes that pass through a few critical international straits, such as the Straits of Gibraltar, Bab-el-Mandeb, Hormuz, Malacca, and Formosa. Perhaps as much as 75% of the world's maritime trade and 50% of the world's shipped oil passes through a handful of critical chokepoints.

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

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

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

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

[25] Ibid., 193.

These critical nodes and chokepoints create opportunities to disrupt trade, which can have immediate and significant economic impacts. By one estimate, the cost to the U.S. economy from port closures on the West Coast due to a labor management dispute in 2003 was approximately $1 billion per day for the first five days, rising sharply thereafter.[26] Terrorist attacks at the world's chokepoints or mega-ports might trigger a similar disruption.

The key to limiting the risk of disruption in the MTS is to ensure security at sea and security and resilience in major ports. Security at sea and in foreign ports requires common effort, awareness, and stronger maritime governance in many coastal States, including the United States. Resiliency in the MTS requires protocols between government and the private sector on how to handle disruptions, minimize impact, and quickly restart the flow of commerce. In early 2007, these types of protocols or regimes were limited or nonexistent.

The Emergence of Transnational Threats

Many of today's maritime threats come from non-State actors that do not respect national borders, are not military in nature, and seek to blend into the normal course of legitimate activity in the maritime domain. Criminal actors are constantly learning, adapting and growing as they use the vastness of the oceans to their advantage, cloak themselves within the anonymity afforded to most maritime activities, exploit advances of globalization, and flourish in weak coastal States with poor governance. Transnational terrorism has leapt into prominence after the 9/11 attacks, and will likely remain the dominant security concern in the maritime domain, for the foreseeable future. The merging of international terrorism with longstanding criminal networks may be the next challenge to peaceful nations.

Maritime Terrorism

Terrorists have shown repeated successful use of the sea to mount deadly attacks. The *Achille Lauro* hijacking, the emergence of the Tamil "Sea Tigers" in Sri Lanka, the Al Qaeda-inspired attacks against the USS *Cole* and the M/V *Limburg*, the Al Qaeda-affiliated Abu Sayyaf's bombing and sinking of the *Superferry 14*, and other such incidents all show maritime attacks as an established means for terrorists to achieve the spectacular economic and psychological impacts they seek. A recurring attack mode in the maritime domain has been the use of small boats

[26] The total cost to the U.S. economy from the 11-day work stoppage has been estimated to be as much as $20 billion. Peter Chalk, "Maritime Terrorism in the Contemporary Era: Threat and Potential Future Contingencies," *The MIPT Terrorism Annual 2006*, 25.

as water-borne improvised explosive devices (WBIEDs). WBIEDs could be used in a *Cole*- or *Limburg*-like attack against cruise ships, petroleum or chemical tankers, busy public waterfront areas, or maritime critical infrastructure. Large vessels could be used as a kinetic weapon against other vessels and critical infrastructure. Vessels could also be used as a delivery platform for an attack employing a weapon of mass destruction (WMD) against a major metropolitan area.

Terrorists have also used the marine transportation system as a threat-vector to move weapons, materials, money, and people for further attacks in the maritime domain or elsewhere throughout the United States. The use of the MTS as a vector is not limited to containerized cargo vessels, but could include any of the thousands of other cargo,[27] fishing, and recreational vessels plying U.S. and international waters.

Criminal Trafficking and Piracy

While terrorism is viewed as the most significant threat to U.S. national interests, criminal activities in the form of piracy, human smuggling, drug trafficking, and weapons and contraband smuggling have all grown significantly in recent years. Trafficking organizations threaten and corrupt the governments of countries worldwide, including many within the Western Hemisphere, and are primary sources of illegal drugs and other contraband. In response to interdiction efforts, maritime traffickers continually modify their transit routes and their means and methods of delivery. Smugglers are finding new ways to avoid detection and apprehension and are becoming more sophisticated in using fraudulent documents and other deception techniques. Maritime piracy has significantly increased since the 1980s,[28] posing dangers to U.S. national interests, global commerce, and the freedom of navigation, including the movement of critical energy commodities.

Finally, the distinction between terrorism and criminal activities is blurring as extremist groups attempt to support their objectives through other criminal enterprises. For example, maritime smuggling can be a more secure avenue than land routes as a channel for weapons, explosives, and lucrative contraband. Terrorists may seek to exploit established smuggling routes, methods, and organizations in an attempt to smuggle weapons and cash, and enter the United States or its territories clandestinely. The criminal financial gains from drug trafficking, piracy, and other criminal enterprises also offer a potential source of funding for terrorists.

Illegal Migration

Illegal migration, as well as organized human smuggling, undermines U.S. sovereignty and challenges the nation's borders. Illegal migration adversely affects regional economies and creates unacceptable conditions of human suffering and loss of life. Such maritime migration can range from the day-to-day movement of individuals to the episodic mass migration of people in response to deteriorating political or economic conditions. Routine illegal migration results in nearly 7,000 maritime interdictions per year.[29] Mass migrations are large-scale

[27] Bulk, break bulk, and car carriers are among the many different cargo vessels that frequent United States ports and are potential conveyances that could be exploited by terrorists or traffickers.

[28] International Maritime Organization - Maritime Safety Committee, "Reports on Acts of Piracy and Armed Robbery Against Ships," *MSC 04, Circular 81*, 22 March 2006.

crises during which tens of thousands of migrants can be interdicted in only a few weeks. The primary source-countries in 2006 for illegal migration and human smuggling were Cuba, the Dominican Republic, Ecuador, Haiti, and the People's Republic of China. Illegal entry into the United States by stowaways, absconders, and/or deserters from commercial vessels calling on U.S. ports also creates new concerns after 9/11.

Environmental Exploitation and Degradation

Depletion of living marine resources is a serious challenge. From 25% to 30% of the world's major fish stocks are overexploited,[30] and a 2004 report indicates that U.S. fisheries are experiencing similar difficulties. Of the country's 267 major fishstocks, roughly 20% were either already overfished, experiencing overfishing, or are rapidly approaching an overfished condition.[31] While declining fish populations are the result of many factors, overfishing, the unintentional removal of non-targeted species (known as "bycatch"), and uneven management are key factors.[32] Other forms of depletion include the illegal harvesting of resources by both domestic and foreign actors.

Although maritime pollution and invasive species are not generally criminal threats, they present similar transnational challenges to maritime governance and sovereignty. Marine pollution continues to have significant acute and chronic affects on marine life and the environment, while marine debris often harms or kills marine organisms, damages fishing gear, and reduces the appeal of recreational beaches. Likewise, the introduction of alien marine species transported in ships' ballast water poses severe threats to U.S. and global ecosystems. More than 7,000 different species are transported around the world every day, an estimated two million gallons of ballast water arrive in U.S. waters every hour, and nearly 500 non-native species are already established in North American coastal habitats.[33]

Disease

Infectious diseases may not seem a significant threat in the maritime domain, yet the legal and illegal movement of people through America's maritime borders could introduce or spread diseases in the United States. Biotechnology, which may emerge as the next innovation to benefit society, could also be misused as a weapon, perhaps with catastrophic effects. This threat is expected to complicate U.S. and global security during the next 20 years, if not longer. While America's maritime borders are not the most significant means of entry for travelers to the United States, vessels arrive in U.S. waters from ports all over the world every day. Any one of the passengers or crew members from these vessels could be a vector, either intentionally or unintentionally, for the spread of an infectious disease.

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[29] This statistic is based on a five-year average of Coast Guard data from fiscal years 2001 through 2005.

[30] Food and Agriculture Organization of the United Nations, *The State of the World Fisheries and Aquaculture*. (Rome, Italy: United Nations 2002), 23.

[31] National Marine Fisheries Service, *Annual Report to Congress on the Status of U.S. Fisheries—2003* (Washington, D.C.: National Oceanic and Atmospheric Administration, 2004), 4.

[32] U.S. Commission on Ocean Policy, *An Ocean Blueprint for the 21st Century*. (Washington, DC: 2004), 40.

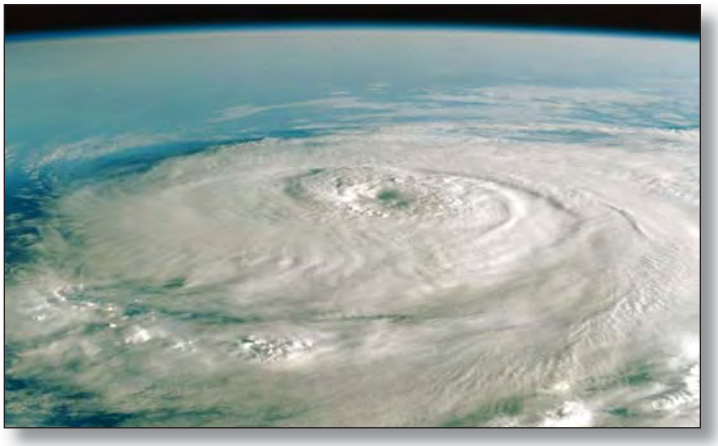
[33] Ibid., 41.

Increasing Scale of and Potential for Catastrophic Events

America is increasingly vulnerable to catastrophic incidents, whether from a terrorist attack or an extraordinary act of nature. Hurricanes Katrina and Rita gave the nation a grim appreciation for the potential size and impact of such incidents. These catastrophes drove home the implications of the nation's population growth in the coastal regions, as well as the potential for mass effects from a terrorist's WMD attack or a natural disaster. Adding to the challenge of responding to maritime disasters is the remarkable increase in size of ships today.

Increased Coastal Density

The increased scale of catastrophic maritime incidents—or the degree of damage resulting from them—is significantly linked to the expanding population and infrastructure densities of the nation's coastal regions. America's coastal population density is five times greater than the country as a whole, and the number of coastal residents could easily increase by another 21 million by 2015.[34] More densely populated and developed coastal areas and urban centers subject more people and property to storms, hurricanes, flooding, and earthquakes. Before 1989, no single storm caused losses greater than $1 billion. Since then, more than a dozen storms have resulted in such losses.[35] The effects of Hurricane Katrina illustrate the potential scale and consequences of incidents in a densely populated coastal region. Katrina effectively forced the evacuation of a major city, shut down a key port, devastated critical infrastructure, and forced the adaptation of the supply chain to minimize economic impact. The hurricane highlighted weaknesses in national operational capability, communications, coordination protocols, and supporting logistic capabilities that are necessary to respond to large catastrophic events in the nation's maritime regions.



Potential Impacts from Weapons of Mass Destruction

The gravest maritime threat facing the nation is the potential for a terrorist group to obtain a nuclear weapon or other WMD and use it within the confines of a major U.S. port city. While much focus has been placed on WMD detection in maritime containers, it is equally probable, if not even more likely, that such a device would be loaded onboard a low-value bulk freighter, a fishing boat, or a recreational yacht or power boat that allows constant possession of a WMD device by a terrorist group. Many of these vessels also operate under minimal regimes and protocols for control, making their movements mostly anonymous to authorities. The catastrophic impacts of such a terrorist attack, launched within dense urban port areas, make this a particularly lethal threat.

[34] Ibid., 41.

[35] Ibid., 42 (with Hurricanes Katrina and Rita added).

Growing Size of Ships

The enormous growth in capacity of cruise liners exemplifies the broader challenges created by the enormous vessels now used in the maritime industry. The new ocean liners are 18 decks high, span the lengths of three football fields, and can carry nearly 6,000 people. A catastrophic incident on one of these ships, whether from a safety hazard or from an intentional terrorist attack, would test the nation's capacity for mass rescue at sea. Ultra-large crude oil carriers are approaching 1,500 feet in length and 300-foot widths. The size of these oil supertankers transiting near U.S. shores means that if an accident does occur, the magnitude of the environmental impacts could be enormous. While standards for construction and operation have improved dramatically since the *Exxon Valdez* spill, the world must now consider that terrorists could potentially hijack and use these vessels as a weapon in order to cause a massive explosion, or intentionally spill millions of gallons of oil as an act of eco-terrorism. Similarly, a containership in the 1960s could only carry a few hundred containers. Today, container ships frequently carry 5,000 containers, and the largest can carry more than 8,000 containers. These ships and their cargoes present a "challenge of scale" for authorities to screen and intercept illegal or dangerous shipments.

Vastness, Anonymity, and Limited Governance of the Maritime Domain

The U.S. exercises certain sovereign rights over 3.4 million square nautical miles of ocean territory in its exclusive economic zone (EEZ). It also oversees some 95,000 miles of shoreline and more than 300 ports of entry, from the largest mega-port to small fishing harbors and marinas. For a "cop on the beat," this is an enormous area in which to monitor the safety of mariners, secure national borders and the global supply chain, and protect natural resources. Adding to those challenges, the maritime domain can be characterized as one of the least governed regions left on earth. Many millions of square miles of ocean are a global commons under no nation's jurisdiction. Unlike national land and air space, with clearly defined borders, much of the ocean is only lightly governed and its maritime borders are generally less restricted and are freely accessible to transit without mechanisms for detection and investigation.

Vessels of all kinds move back and forth between U.S. offshore waters and the high seas, with minimal or no oversight and limited requirements for reporting their activities. Many are anonymous and unmonitored as they travel through U.S. territorial seas and economic zones, and announce their presence only after arrival, if at all. While safety, security, and stewardship regimes are increasingly being developed for larger vessels on the sea, many smaller vessels, including most fishing vessels, tugs, and recreational vessels, are not covered by these regimes and remain largely anonymous.

Limited oversight and visibility creates a challenging environment for the enforcement of maritime sovereignty, including the protection of natural resources and the control of maritime borders. The permeability of U.S. maritime borders to the movement of goods and all types of vessels makes the maritime domain attractive for criminal and terrorist activities. With tightening security at U.S. land borders, and with the extensive security applied to air travel, criminal and terrorist actors may look to the vast and open sea to find easier movement and less stringent security precautions. These criminal and terrorist elements will also seek out areas lacking strong governance as places to establish, stage, and ultimately export their illicit activities to other portions of the maritime domain.

Section III
Maritime Governance

"Maritime governance" involves the use of institutions, structures of authority, and sovereign capabilities to oversee maritime activities and safeguard national maritime interests. Shaped by global threats and challenges, efforts to govern the maritime domain today reflect complex, interwoven mutual interests and actions. Maritime nations, industries, and stakeholders work together to ensure maritime safety, security, and stewardship in the global commons. At the same time, each coastal State must address sovereign responsibilities in waters under its jurisdiction. These global and local actions to promote safety, security, or environmental protection often are interrelated and complementary in how they advance national interests. The Coast Guard uses a system view of these activities to help shape and lead maritime governance today.

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A Systems Approach to Maritime Governance

Coast Guard actions and initiatives are best understood when viewed as parts of a larger interlocking system of governance comprised of ***maritime regimes, domain awareness, and operational capabilities.***

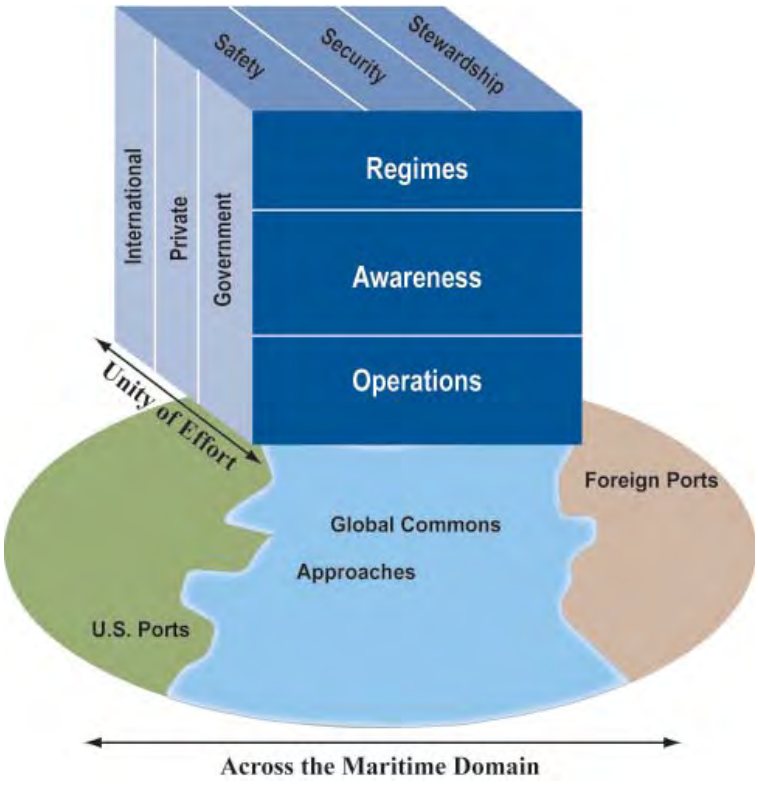

Figure 2: Conceptual depiction of maritime governance

Regimes are the system of "rules" that shape acceptable activities. Awareness involves the detection and monitoring of activities occurring within the maritime domain. Together, regimes and domain awareness inform decision makers and allow them to identify trends, anomalies, and activities that threaten or endanger U.S. interests. Operational capabilities allow authorities to deter, respond to, verify, and counter threats. They also allow the safe and sustainable day-to-day use of the maritime domain and speed recovery from natural or man-made impacts in times of crisis.

These activities are not the sole province of the Coast Guard; they require participation from federal, state, local, private and international partners and demand unity of effort. Nor are they solely domestic; they span the globe and take place throughout the maritime domain. A systems approach to maritime governance must be global in scope and must be built upon a foundation of international cooperation. Finally, these activities provide a common framework for advancing safety, security, and stewardship, often serving all three through common regimes, monitoring, and enforcement efforts.

Viewing maritime initiatives and policies as part of a larger system enables a better understanding of their inter-relationships and effectiveness. A well designed system of regimes, awareness, and operational capabilities creates overlapping domestic and international safety nets, layers of security, and effective stewardship. Taken together, they provide a comprehensive, integrated system of maritime governance for the nation.

Maritime Regimes

"While legal, policy, and institutional frameworks exist for managing some ocean uses, there remain increasingly unacceptable gaps. The nation needs a coordinated offshore management regime that encompasses traditional and emerging uses and is adaptable enough to incorporate uses not yet clearly foreseen."

-Final Report of the U.S. Commission on Ocean Policy, 2004

Maritime regimes are the system of rules consistent with the established legal order (including international law; regional, multinational, or bilateral agreements; domestic laws and regulations; and standard practices and procedures) that shape and define acceptable activity and enforcement schemes. They touch both international and domestic activities and apply across the global supply chain, throughout the marine transportation system, and to the natural resources of the domain. These regimes build upon a single unifying framework, the U.N. Convention on the Law of the Sea,[36] which reflects an international consensus on the balance of the rights and duties between coastal, flag, and port States. Regimes also encompass the operational frameworks necessary for action, including coordination across government and industry for preparedness, response, and recovery.

Some maritime regimes have grown from centuries of practice and custom. Many were developed in response to specific maritime catastrophes, such as oil spills or marine casualties, and focus on a narrow set of issues. Other regimes were created to guide the use of new technologies, such as electronic charts and advances in communications. The ad hoc development of maritime regimes has resulted in a patchwork approach to maritime governance that contains gaps and lacks integration. While such shortcomings may have been manageable in the past, they are a concern today.

After the terrorist attacks of 9/11 the Coast Guard must look anew at existing maritime regimes as a systematic set of rules. Under scrutiny, current domestic and international maritime regimes can lack integration and may be insufficient to protect the United States and coastal nations against growing transnational threats, such as international terrorism. In ocean policy, the U.S needs integrated regimes that address concerns ranging from increased use of the EEZ to new uses of the Arctic. To fill these gaps and create a more integrated system, the Coast Guard must work to strengthen existing maritime regimes, and develop new ones where necessary.

[36] The United Nations Convention on the Law of the Sea entered into force on November 16, 1994. The U.S. has signed, but has not yet acceded to the treaty.

Domain Awareness

"Maritime Domain Awareness (MDA) is the effective understanding of anything associated with the global maritime domain that could impact the security, safety, economy, or environment of the United States."

-National Plan to Achieve Maritime Domain Awareness, 2005

Domain awareness is a critical enabler that both informs the development of regimes and supports effective operations. Awareness requires that all-source intelligence and broad situational awareness[37] be integrated to allow the United States and other nations to effectively understand activities, events, and trends that could threaten their safety, security, or natural resources. Awareness enables the nations of the world to better govern the global maritime commons. This knowledge is also necessary to inform the development of prevention-based requirements and standards, as well as enable coordinated response actions to counter criminal, terrorist, or other threats. This is especially important for combating transnational threats such as terrorists desiring to deliver a WBIED against a target using a small boat. Detecting and disrupting such threats while they are in the planning phases of an attack is much more likely to be successful than attempting to protect critical infrastructure and high value targets from attacks with defensive tactics on the water. Awareness can also trigger action to address unwelcome trends that impact safety, commerce, or the maritime environment and its natural resources.

Improving awareness requires continued development of traditional all-source maritime intelligence capabilities, as well as a broader maritime situational awareness that leverages maritime Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) capabilities and provides a "picture" of conditions and activity across the maritime domain. This awareness will include information about vessels (dynamic track data as well as static data on history, ownership, characteristics, etc.), people (passengers, crew, dock workers, agents, etc.), cargoes, weather, environment, and infrastructure. Achieving maritime domain awareness will involve collection, fusion,[38] analysis, and dissemination to a wide range of decision makers from local enforcement officers to national leaders. The Coast Guard is working with DoD and other partner agencies to build domestic and global awareness of the maritime domain, but this will require the participation of all maritime stakeholders. Government and private stakeholders must establish an unprecedented level of information sharing and intelligence integration.

[37] Situational Awareness involves having specific, real-time knowledge of vessels, people, infrastructure, environmental conditions, and activities as they occur within the maritime domain, including maritime approaches, ports and inland waterways, anchorages, fishing grounds, choke-points, shipping lanes, etc.

[38] Fusion refers to mining, organizing, and correlating data to enable subsequent analysis.

The United States must protect its maritime interests across a vast domain with a limited number of assets spread out across multiple organizations. Having a shared awareness and understanding of the maritime domain among these organizations is essential for effective prevention, response, and recovery operations. This shared awareness acts as both a force multiplier and a means for coordinating maritime activities. Operations guided by intelligence and broad situational awareness can cover greater distances with greater accuracy in targeting their interdiction efforts. Tools that provide this shared awareness, such as a common operating picture (COP), will also greatly enhance unity of effort among the diverse group of organizations with maritime responsibilities and interests. Conceptually, global awareness systems could also assist the private sector in monitoring the global supply chain and improving the efficient flow of goods between nations.

U.S. maritime authorities are still hampered, however, by many gaps in their awareness—in their access to, and ability to share, fuse, and analyze large amounts of information regarding maritime activities—their ability to monitor the domain itself—and their ability to disseminate information through a national common operating picture. Of particular concern is the United States' lack of capabilities to monitor vessel movements within many ports and inland waterways; drug trafficking and illegal migration along known transit routes; fishing activities throughout the EEZ; and activities in the Arctic region. While the U.S. requires large vessels to give notice 96 hours prior to their arrival at U.S. ports, authorities are currently unable to monitor port approaches to ensure that all inbound craft have provided notice and been properly vetted. The maritime domain is a commonly used vector for drug trafficking and illegal migration because of limited or non-existent monitoring of off-shore waters and coastal areas. Fishery conservation efforts depend upon monitoring schemes that rely on the cooperation of fishermen, and the fragile Arctic is essentially invisible to us. Of even greater concern is the inability to monitor smaller vessels, which have little or no reporting requirements and are largely anonymous in the U.S. maritime domain. Terrorist groups have repeatedly used small boats as WBIEDs, and could also use such vessels to smuggle WMD materials, weapons, and people into the U.S. Detecting and tracking smaller vessels is one of the most pressing priorities for awareness efforts in the maritime domain.

Operational Capabilities

"The creation of an effective National Preparedness System will require the Federal government to transform the way it does business. The most important objective of this Federal transformation will be to build and integrate operational capability. Each Federal department or agency…needs operational capability—or the capacity to get things done—to translate executive management direction promptly into results on the ground."

-The Federal Response to Hurricane Katrina: Lessons Learned, February 2006

Finally, the United States must have the operational capability (and sufficient capacity) to ensure the safety, security, and stewardship of the maritime domain. This capability includes shore-based and mobile platforms, aircraft, and trained personnel—supported by dedicated command, control and logistics networks—that are capable of operating on inland waterways, the Great Lakes, coastal waters, the high seas, and beyond. These forces create the presence needed to deter illegal acts, influence activities that threaten the nation, protect U.S. sovereignty, and defend the nation. Coast Guard Deepwater assets must have the capacity not only to patrol U.S. coastal areas and maritime approaches, but also sustain maritime operations on the high seas and in the littoral waters of other coastal States. Deepwater assets are necessary for ensuring the safety of mariners and protecting natural resources in the far reaches of the EEZ, as well as interdicting transnational threats in international chokepoints, and off the distant coasts where criminals emerge. These maritime patrol forces are complemented by shore-base assets and by the growing Coast Guard capacity to deploy specialized forces to major events, such as environmental or natural disasters or nationally significant security events.

The maritime operational capacity of the United States includes military assets capable of activities ranging from nation building and power projection to national defense and the security of the homeland. The United States' naval forces—the U.S. Navy, Marine Corps and Coast Guard—must be closely aligned, maintain a high level of interoperability, and work together seamlessly when called upon to support the Combatant Commanders.

While the Integrated Deepwater System program is essential to sustaining and improving the service's operational capacities, the Coast Guard must work towards closing other capability gaps as well. For example, helping other nations strengthen their ports has become a major component of the U.S. strategy for "layered security." The Coast Guard, however, has limited capacity to engage in these vital international activities. Another emerging security requirement is the need to interdict and defeat terrorists in the maritime environment. As a result, the Coast Guard is working with the Department of Defense and the Department of Justice to fashion an integrated maritime counter-terrorism capability. Other factors, such as the melting of the polar ice caps and the potential for increased activities in the Arctic,[39] have created growing concerns over the Coast Guard's future ability to provide operational support to U.S. activities in the polar regions. One of the Coast Guard's most valued assets is the extensive, specialized expertise of its members in maritime safety, security, and stewardship. The rate of change in today's dynamic maritime environment, however, is accelerating. Factors such as new technology are constantly evolving the way maritime activities are being conducted. Ensuring that the Coast Guard's competencies and expertise keep pace with change is an increasingly difficult challenge for the service.

Addressing these gaps will require innovative and collaborative solutions. The terrorist attacks of 9/11 and the response to Hurricanes Katrina and Rita demonstrated the need for better integration of U.S. operational capabilities. Further, these events have shown that federal capacity alone is insufficient to meet national needs. State and local agencies, non-governmental organizations, and private industry provide essential capabilities in the maritime domain. Successful response to threats and hazards requires an integrated, cooperative approach where unity of effort is the *modus operandi* for operations in the maritime domain.

[39] There is a growing gap in operational capability to monitor—and enforce U.S. sovereign rights—in the polar regions. The National Research Council has stated that "greater human activity will increase the need for the United States to assert a more active and influential presence as a world power concerned with the security, economic, scientific, and international political issues of the (Arctic) region." As such, the Council acknowledged the need for more U.S. government icebreaking operational capability by concluding that "national interests in the polar regions require the United States immediately program, budget, design, and construct two new polar icebreakers to be operated by the U.S. Coast Guard." National Research Council, *Polar Icebreakers in a Changing World: An Assessment of U.S. Needs* (Washington, DC: 2006), SC-1, S-9.

Spotlight on Maritime Governance:

Securing the Nation's Maritime Borders

Securing the nation's borders is one of the most important roles of government. The U.S. maritime borders are comprised of relatively open ports and coastlines that present an attractive avenue for entering illegally, conducting terrorist attacks, trafficking contraband, or committing other criminal activities. As the United States improves control over its air and land borders, the nation's expansive maritime borders could become a less risky alternative for bringing people and materials into the country illegally. The key to an effective, layered system of border controls, then, is balance and coverage across the air, land and maritime domains. Just as there are controls for the nation's airspace and land crossings, there is a "wet" component to securing the nation's borders.

The maritime border environment is particularly challenging because of its complexity. The maritime border is not only a vast space with diverse pathways into the nation; it is filled with all types of legitimate activity that can be exploited by terrorists and criminals. Fishing, commercial shipping, oil drilling and transport, resource extraction, pleasure boating, and other activities are constantly in motion in the waters that surround the nation.

Securing the maritime borders requires a layered approach of regimes, domain awareness, and operational capabilities. Interlocking *regimes* create rule-sets for operating vessels, transiting the domain, conducting maritime activities, entering ports of entry, declaring and unloading cargoes, and debarking passengers and crewmembers. Regimes also establish authorities and protocols for actions such as interdicting

vessels, controlling ports of entry, inspecting vessels and cargoes, and verifying the credentials of mariners, recreational boaters, and passengers. *Domain awareness* involves monitoring the compliance of activity, detecting anomalies that may signal illegal acts, and generating intelligence that enables law enforcement authorities to stop unlawful entry into the United States. Screening vessels, people, and cargo; surveillance and tracking maritime activity; and gathering, fusing, and distributing intelligence are all essential activities. *Operational capabilities*—trained personnel, aircraft, cutters and boats—close the triangle of maritime governance to secure the maritime border. Not only does active presence on shore and at sea allow forces to respond to and stop border threats, maritime forces generate valuable surveillance and awareness and create a deterrent effect against all forms of criminal activity in the maritime border region.

The U.S. maritime border, like the land and air borders, is integral to the global system of trade. Securing the maritime border is an *international activity* that requires pushing the nation's layers of border security far away from its shores -- through U.S. waters, onto a well governed ocean commons, then seamlessly joining the secure maritime domain of foreign partners. It also requires *extensive partnerships* that integrate and build unity of effort among governments, agencies, and private-sector stakeholders around the world.

Finally, the nation's economic and national security requires that ports of entry, operations, and critical infrastructure are resilient and continue to function effectively in the wake of a natural disaster or security incident. Contingencies for border management and recovery systems must be capable of protecting the lives and property of its citizens while simultaneously assuring the continuity of commerce and critical maritime activity.

Section IV
Strategic Priorities for the U.S. Coast Guard

The complex challenges and threats facing the United States require that the Coast Guard think and act anew. To prepare for the future, the Coast Guard has identified six cross-cutting strategic priorities that improve the nation's preparedness and advance U.S. maritime interests. These priorities draw on the Coast Guard's key strengths and, taken together, outline how the Coast Guard will work to improve safety, security, and stewardship in the maritime domain, now and into the future. These six strategic priorities are: ***Strengthening Regimes for the U.S. Maritime Domain****;* ***Achieving Awareness in the Maritime Domain****;* ***Enhancing Unity of Effort in Maritime Planning and Operations****;* ***Integrating Coast Guard Capabilities for National Defense****;* ***Developing a National Capacity for Marine Transportation System Recovery****; and* ***Focusing International Engagement on Improving Maritime Governance.***

The Coast Guard has already taken important measures in many of these areas. The Service has accelerated efforts to improve the nation's maritime regimes, awareness, and operational capabilities following 9-11. Efforts are also underway to integrate these initiatives, build collaboration, and increase unity of effort. Still, gaps remain. The Coast Guard will work with Congress and other federal, state, local, private, and international partners to make the needed changes. And in some cases, the way ahead can only begin with national and international dialogues where stakeholders will help determine the changes necessary to improve maritime governance.

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[40] These strategic priorities were shaped by Project Evergreen, the Coast Guard's long term scenario-based strategy process, as well as a comprehensive review of national plans and policy. Of particular importance were the goals, national priorities, recommendations, and strategic actions found in: The *2006 DHS Priority Goals* (July 21, 2006), the *Interim National Preparedness Goal* (Homeland Security Presidential Directive 8 (March 2005)), the White House report *"The Federal Response to Hurricane Katrina: Lessons Learned"* and the *National Strategy for Maritime Security* (NSMS) and its eight subordinate plans.

Strengthening Regimes for the U.S. Maritime Domain

The Coast Guard must work with DHS, interagency partners, maritime stakeholders, and the international community to update and strengthen maritime regimes to address emergent threats and challenges. The result will be a set of coordinated and interlocking domestic and international regimes that provide better consistency for legitimate users, reduce potential conflicts, improve marine transportation system resiliency, and create a more ordered environment for governing the maritime domain.

Engage in a National and International Dialog to Strengthen the Nation's Maritime Regimes

The Coast Guard will initiate a national dialog on the changes needed to strengthen U.S. maritime regimes. Concurrently, the Coast Guard, in coordination with the Department of State, will engage the international maritime community and explore potential regimes of mutual benefit. The Coast Guard's objective is to work through its partnerships to identify rules that: increase the transparency of vessels, people, and maritime activities; reduce overall risk; and balance competing uses of the maritime domain.[41]

Increasing transparency means improving the nation's ability to distinguish among different types of vessels, people, and activities occurring on the water.[42] One of the most recognized gaps in the maritime domain is awareness – authorities today are "blind" to much maritime activity. However, domain awareness cannot be achieved without rules that increase the overall transparency of the maritime system.[43] Awareness without the enabling regimes also will not allow the United States to make intelligent, risk-based, decisions regarding threat identification, compliance and enforcement activities, ocean usage, or natural resource

[41] *The* NSMS identifies "Embedding Security into Commercial Practices" and "Deploy Layered Security" as two of its five strategic actions. Strengthening regimes is critical to accomplishing these two actions. Department of Homeland Security, *National Strategy for Maritime Security* (Washington, DC: 2005), 18-23.

[42] Increasing transparency through updated maritime regimes is critical to achieving DHS goals and priorities designed to control U.S. borders and strengthen screening procedures.

[43] Section 109 of the *Safe Port Act of 2006* directs the Secretary of DHS to publish a rulemaking requiring foreign vessels arriving at U.S. Outer Continental Shelf facilities to submit an Advance Notice of Arrival. This is an excellent example of a change in the existing maritime regimes needed to increase the transparency of vessels operations in and around the United States.

management. New or strengthened regimes can increase transparency in such areas as:

- Vessels: Size, type, purpose, registry, location, destination, etc. Transparency is especially lacking when it comes to the activities of smaller commercial and recreational vessels.
- People: Citizenship, criminal history, qualifications etc. of operators, passengers, crew, transportation workers, vendors, etc.
- Activities: Type, location, time of year, cargo, etc.

Reducing risk means mitigating threats, vulnerabilities, or consequences until acceptable levels are achieved. Reducing risk is accomplished by:

- Systematically identifying and prioritizing risks.[44]
- Deploying mitigation strategies that emphasize defense in depth and recognize the interactions between the system and components across safety, security, and stewardship concerns.
- Balancing the deployment of prevention and protection measures with the facilitation of commerce and the legitimate and sustainable use of the maritime domain.

A critical area that must be addressed is the risk of terrorists using small vessels, either as WBIEDs to attack maritime targets, or as a means to smuggle WMD into the U.S. The United States and the international maritime community must address the prevention and mitigation of such activities. Strengthening regimes will be an important part of that discussion.

Balancing competing uses means accommodating diverse and growing maritime use in a safe, secure, and equitable manner. It may also mean that traditional notions of unlimited access, privacy, and use are balanced with the societal need for safety, security, and stewardship. Competing uses are balanced by:

- Recognizing interdependencies across safety, security, and stewardship, and deploying solutions that minimize mariner impact while improving desired outcomes.
- Identifying potential or actual conflicts and developing solutions that allow legitimate, sustainable uses without damaging the marine environment or threatening national interests.

Competing uses may be particularly challenging in the Arctic.[45] The Coast Guard must be more active in the development and implementation of national and international regimes specific to that region. These should include requirements that ensure, at a minimum:

- Safe and reliable navigation throughout the region.
- Multinational cooperation on vessel traffic routing.
- Comprehensive environmental protection and safety standards that base prevention measures on an in-depth risk assessment.

Develop Regimes that Support U.S. Ocean Policy

In response to the recommendations of the U.S. Ocean Commission for a more comprehensive approach to ocean policy, *Executive Order 13366 and the U.S. Ocean Action Plan*[46] created a federal interagency governance structure for ocean-related matters. The Coast Guard will actively participate and serve as the lead for DHS within this structure. The Coast Guard will:

- Contribute to and support policies and actions taken by the Committee on Ocean Policy (COP), the Committee on Marine Transportation Systems (CMTS), and their subcommittees.
- Incorporate DHS and Coast Guard requirements for safety, security, and stewardship into the *Ocean Action Plan* data collection requirements for the Integrated Ocean Observing System (IOOS), Global Ocean Observing System (GOOS), the CMTS database, and National Research Priorities
- Promote the development of regimes that achieve U.S. Ocean Policy goals and objectives.

[44] The Coast Guard has developed several risk-based decision making tools to identify and prioritize risk. The Maritime Security Risk Assessment Model (MSRAM) is currently being used by Area Maritime Security Committees to quantify risk to U.S. ports and waterways and establish common doctrine for risk-based decision making in the maritime domain.

[45] The National Research Council has noted, "Economic activity is predicted to increase and move northward as a result of sea ice retreat. Those deploying fishing fleets, cruise ships, mining and the associated ore transit ships, as well as petroleum recovery and transport anticipate increased operations in the region." National Research Council, *Polar Icebreakers in a Changing World: An Assessment of U.S. Needs* (Washington, DC: 2006), S-2.

[46] In 2004, the U.S. Commission on Ocean Policy issued its final report, *An Ocean Blueprint for the 21st Century*, which contained numerous practical recommendations for developing a comprehensive, coordinated ocean policy for the United States. In response to the report, the President released the *U.S. Ocean Action Plan: The Bush Administration's Response to the U.S. Commission on Ocean Policy.*

Achieving Awareness in the Maritime Domain

The Coast Guard, acting for DHS, must implement the systems and processes necessary to achieve maritime domain awareness as required by the *National Strategy for Maritime Security.*[47] The Maritime Domain Awareness Implementation Team (MDA-IT),[48] co-lead by DoD and DHS, will create a collaborative maritime intelligence and information sharing environment, supported by infrastructure for sensing, collecting, fusing, analyzing, and disseminating information. These actions will enable the United States to identify, understand, and take action against maritime-related threats and hazards as early and as distant from U.S. shores as possible. To do this, the Coast Guard will work to:

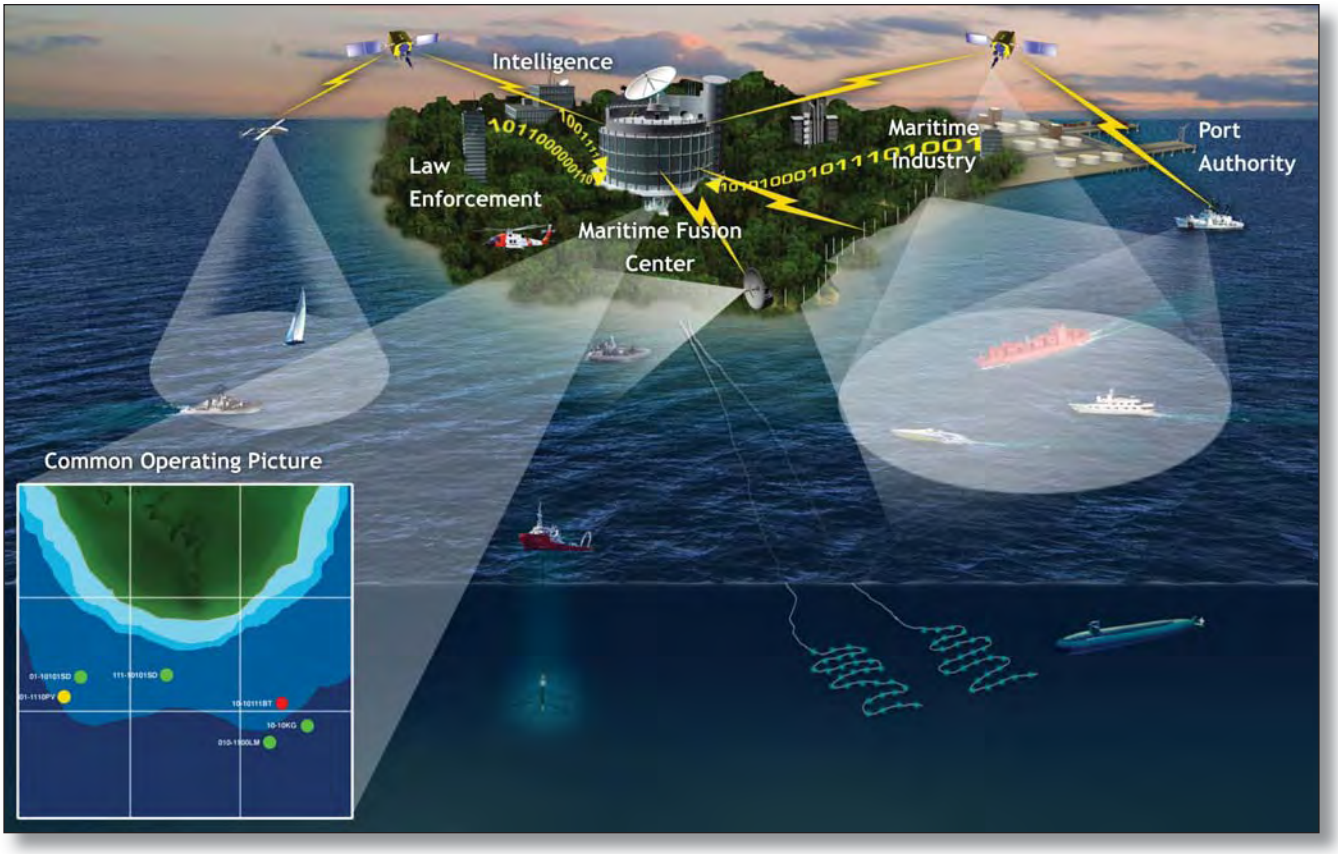
Increase the Ability to Sense and Collect Maritime Data

Enforcing maritime sovereignty requires awareness of the people, vessels, cargoes, and activities in the maritime domain. Many "blind spots" exist, however, and one of the most pressing challenges authorities face in securing the nation's maritime borders is tracking and understanding the enormous volume of activity in and around U.S. waters. The Coast Guard will work closely with other agencies and maritime stakeholders to close critical information gaps that limit awareness in the maritime domain. This will involve increasing or improving:

- *Port, coastal and offshore surveillance*. The Coast Guard will increase its ability to monitor maritime activities through improvements to its Vessel Traffic Service systems, the implementation of Rescue 21, and the increased sensing capabilities of its new Deepwater assets. These improvements will also enable greater unity of effort through improved "Blue Force" tracking (i.e., the tracking of Coast Guard and other friendly maritime forces).
- *Vessel tracking systems*. The Coast Guard will use Automatic Identification System (AIS) technology to provide continuous, real-time information on the identity, location, speed and course of vessels operating in designated areas of the U.S. maritime domain. AIS capabilities are already operational in several U.S. ports, and the Coast Guard's Nationwide Automatic Identification System (NAIS) project will expand these abilities to ports nationwide. For vessels beyond the U.S. maritime domain, the Coast Guard is working with the International Maritime Organization (IMO) to develop a global Long Range Identification Tracking (LRIT) scheme that will provide information on ships of 300 gross tons and above operating within 1,000 nautical miles of the United States.
- *Transparency of maritime activities.* The Coast Guard and DHS will work with federal, state, and private sector partners to improve the transparency of maritime activities, including merchant mariner licensing, and vessel documentation and registration systems, that strike a balance between national security and commercial interests. The Coast Guard and Transportation Security Administration (TSA) will develop and enforce the Transportation Worker Identification Credential (TWIC) program for all transportation workers in the U.S. maritime domain.
- *Collection of intelligence on maritime activities.* The Coast Guard will continue to expand its capabilities to collect human and other intelligence through new

[47] The NSMS identifies "Maximize Domain Awareness" as one of its main strategic actions and states, "A key national security requirement is the effective understanding of all activities, events, and trends within any relevant domain…that could threaten the safety, security, economy, or environment of the United States." "To maximize domain awareness, the United States will leverage its global maritime intelligence capability…and oversee the implementation of a shared situational awareness capability that integrates intelligence, surveillance, reconnaissance, navigation systems, and other operational information inputs." Department of Homeland Security, *National Strategy for Maritime Security* (Washington, DC: 2005), 16.

[48] NSPD-41/HSPD-13 required the Secretaries of Defense and Homeland Security to coordinate national efforts to achieve maximum maritime domain awareness, including the development of a national plan for improving domain awareness in support of the NSMS. The MDA Implementation Team (MDA-IT) was formed to coordinate the implementation of the resulting *National Plan to Achieve Maritime Domain Awareness*, including the development of a MDA concept of operations and an integrated investment strategy.



Field Intelligence Support Teams (FISTs), Coast Guard Attaches, and deployable Maritime Intelligence Support Teams (MISTs). The Coast Guard will also work with maritime stakeholders to expand the use of maritime community watch programs.

- *WMD detection.* The Coast Guard is establishing basic radiation detection capabilities for all boarding and inspection teams, and is building the necessary competencies and experience to effectively use the more advanced human portable radiation detection systems (strategically distributed amongst Coast Guard units) within the maritime domain.

Improve the Fusion and Analysis of Maritime Intelligence

Early warning of evolving conditions and threats requires collecting data from many sources, fusing together different pieces of information, and conducting analysis, often before intelligence is refined enough "to connect all the dots." The Coast Guard is working with other government agencies and a wide range of maritime stakeholders to improve information sharing, fusion, analysis, and maritime intelligence integration.[49] As a member of the Intelligence Community, the Coast Guard is well positioned to integrate maritime intelligence through a network of information collection, fusion, and analysis centers. This network includes a core element at the National Maritime Intelligence Center (NMIC) linked to a number of other critical nodes such as the National Vessel Movement Center (NVMC), the Inland River Vessel Movement Center (IRVMC), the National Targeting Center, Global Trader, and the Maritime Intelligence Fusion Centers. In order to increase the effectiveness of the maritime intelligence enterprise, the Coast Guard will work to:

- *Increase Interagency Participation.* Achieving a fully functioning core element at the NMIC requires strong representation from DHS, including Customs and Border Protection (CBP) and Immigration and Customs Enforcement (ICE), as well as the Federal Bureau of Investigation (FBI), Drug Enforcement Agency (DEA), National Security Agency (NSA), and other agencies.
- *Improve Analytic Capabilities.* Successfully identifying evolving trends and threats, especially threats related to transnational terrorism, requires sophisticated analysis

[49] The *Global Maritime Intelligence Integration (GMII) Plan* (required by NSPD-41/HSPD-13) establishes an intelligence enterprise and community of interest that effectively supports MDA. The Director of the GMII intelligence enterprise has oversight for the collection, integration, and analytical coordination of maritime intelligence and reports to the Director of National Intelligence. *Global Maritime Intelligence Integration Plan* (Washington, DC: 2005).

methods, such as anomaly detection and pattern recognition programs.

- *Expand the collection and analysis of open source information from the private sector.*
- *Increase the reporting of information and intelligence from state and local law enforcement entities.*

Transform the Sharing and Dissemination of Maritime Information

One of the important findings of the 9-11 Commission was not that information was unavailable, but that it was not properly shared and understood. To address this within the maritime domain, the Coast Guard will support the efforts of the MDA-IT and the Intelligence Community to create an information sharing environment that links all levels of government together through a common operational picture (COP),[50] and corresponding common intelligence picture (CIP). This information sharing environment will combine situational awareness with elements of shared information and intelligence in order to provide information to decision makers throughout the public and private sectors, as well as improve mission execution and unity of effort among agencies with maritime responsibilities. To accomplish this, the Coast Guard will:

- *Develop a global maritime data sharing community of interest (COI).*[51] This maritime COI will work to bridge separate, stove-piped, and proprietary networks to better share information and intelligence. This will require extensive partnerships among the boating public, the maritime industry, law enforcement, the Intelligence Community, defense establishments, and other federal agencies, state, local, and international partners to be successful.[52] A first step will be to pilot a program with NORTHCOM that establishes data exchange procedures and protocols to support the national MDA enterprise.
- *Create a national common operating picture (COP) within the maritime domain that uses a services-oriented architecture (SOA) and facilitates user-defined operational pictures (UDOPs).*[53] The SOA will be an access-controlled, "publish and subscribe" system that serves as the primary method for information sharing, collaborative planning, and decision support for members of the COI.
- *Invest in Coast Guard capabilities that will promote information sharing.* Initiatives such as integrated command and control centers (similar to Project Seahawk and other Joint Harbor Operations Centers), Command 2010, Maritime Awareness Global Network (MAGNET),[54] and Deepwater will facilitate and significantly improve information sharing and unity of effort among maritime entities.
- *Increase Coast Guard capacities to share information at the port level.* The Coast Guard will expand its use of Sector Intelligence Officers (SIOs) and FISTs to oversee collection and reporting activities, promote sharing of intelligence and other law enforcement information among Coast Guard commands, DHS components, and other federal, state, and local law enforcement agencies, and the dissemination of threat information with the operators of critical infrastructure.
- *Remove cultural and legal barriers hindering information sharing.* Promote a philosophy of "need to share" and advocate architectures and policies that enable appropriate distribution of data and information.
- *Designate existing centers of intellectual capital and capabilities as "centers of excellence."* These centers will foster greater understanding of the MDA processes, stakeholder relationships, test adequacy of MDA systems and sensors, and support exercises to measure the effectiveness of MDA support to decision-makers. At least one of these centers of excellence should be staffed and operated to develop strategic-level collaborative guidance.

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[50] The *National Plan for Achieving Maritime Domain Awareness* describes a common operating picture as a network-centric, dynamically tailorable, near real-time virtual information grid that can be shared, at appropriate security levels, by federal, state, local, and international agencies with maritime interests and responsibilities.

[51] A data sharing Community of Interest (COI) is a collaborative group of people that must exchange information in pursuit of its shared goals, interests, missions, or business processes.

[52] HSPD-8 establishes information sharing between federal, state, local, tribal, and private sector entities to enable effective prevention, protection, response, and recovery activities as a national priority.

[53] A User Defined Operational Picture (UDOP) is a display of relevant information defined by an individual user. Under the *National Plan for Achieving Maritime Domain Awareness*, each user should have the ability to filter and contribute to the COP according to their information needs, responsibilities, and level of access.

[54] Maritime Awareness Global Network (MAGNET) is an intelligence tool that provides for the collection, correlation, fusion, and dissemination of maritime information via web-enabled user interfaces to specific user groups in support of MDA.

Enhancing Unity of Effort in Maritime Planning and Operations

The complexity and challenges of today's operating environment require that government agencies at all levels and stakeholders with maritime interests work together to achieve common interests and objectives through improved unity of effort. More than 100 of the 125 recommendations from the Hurricane Katrina Lessons Learned Report were focused on improving interagency coordination.[55] The Coast Guard will work with DHS to enhance command and control capabilities, grow operational planning capabilities, and improve readiness for large-scale maritime operations. In doing so, the Service will fill a critical gap in the coordination and integration of maritime operations in order to promote interagency operations in meeting national response needs.

Create an Integrated Command, Control, and Communications (C3) System

DHS must have a flexible and reliable C3 system to support dynamic, unified response operations.[56] This system must maintain connectivity among federal, state, and local authorities and provide full situational awareness to support real-time local, regional, and national decision making. This system should facilitate federal, state, and local coordination, and accommodate industry, private, and non-governmental organization (NGO) participation. A robust C3 system will make the best use of technical expertise to coordinate public services. To help create this system, the Coast Guard will:

- Establish unified command centers at the local (Coast Guard Sector) level as part of the service-wide

[55] "During the Federal response to Katrina, four critical flaws in our national preparedness became evident: Our processes for unified management…command and control structures…knowledge of our preparedness plans…and regional planning and coordination." The White House, *The Federal Response to Hurricane Katrina: Lessons Learned* (Washington, DC: 2006), 52.

[56] Building a nimble, effective emergency response system is a national priority within the current DHS goals and priorities. *Department of Homeland Security Priority Goals: July 21, 2006* (Washington, DC: 2006), 6.

initiative. Integrated command centers will allow governmental partners to work side-by-side to carry out joint mission planning and operations, and provide fusion of local intelligence and common operating pictures.[57]

- Work with the Federal Emergency Management Agency (FEMA) and other government agencies to establish mobile command centers with sufficient capabilities and skilled incident management personnel to meet national needs. These centers would be deployed immediately to replace or supplement fixed C3 systems that are compromised, insufficient, or too remote to meet response needs.

- Continue to coordinate the C3 investments under Deepwater, Rescue 21, and Command 2010, with the Secure Border Initiative and other similar DHS programs. This action will provide integrated C3 tools to maritime forces that will work seamlessly with the land and air components to effectively control U.S. borders.

Focus on Integrated Planning, Exercises, and Evaluation

The U.S. Government must create the planning structures for ensuring unity of effort in maritime operations. As an established leader in maritime mission coordination, the Coast Guard will work with maritime stakeholders to create unified plans that are adaptable and scalable to meet emerging threats. The Coast Guard and its industry partners must also explore how to test, evaluate, and measure collective preparedness and use the lessons learned to improve responses to major maritime safety or security events. To enhance national planning and preparedness, the Coast Guard will:

- Provide increased support to the DHS Office of Policy to facilitate the integration of maritime issues into national plans, policies, and strategies. In this regard, the Coast Guard will continue to provide support on behalf of DHS to the Maritime Security Policy Coordinating Committee and its supporting subcommittees and working groups.

- Work with DHS to build professional development programs focused on creating common doctrine and practices among interagency professionals.[58]

- Integrate the efforts of the Coast Guard Preparedness and Exercise Coordination Program with the DHS Exercise Evaluation Program to enhance assessment, planning, resource allocation, exercises, lessons learned, and remedial actions.

Optimize Operational Capabilities to Meet National Threats & Challenges

The success of the *National Response Plan* (NRP) and *National Strategy for Maritime Security* (NSMS) is predicated on the government's ability to provide integrated operational capability in an interagency environment. DHS must be able to effectively flow forces capable of coordinated maritime operations. To improve the effectiveness (and interoperability) of its operational capabilities, the Coast Guard will reorganize Coast Guard forces under a strategic "Force Trident" that includes:

- *Shore-based multi-mission forces of Coast Guard Sector commands.* The consolidation of Coast Guard operational commands in each major port region will provide coordinated service delivery and improved unity of command and effort.

- *Maritime patrol and interdiction forces.* Newly recapitalized assets under the Integrated Deepwater System will be highly adaptable and capable of meeting homeland and national security needs throughout the maritime domain. This fully networked and highly mobile force will significantly improve domain awareness and be fully capable of coordinating multi-mission, interagency operations. These forces work principally in the offshore and international environments but can also operate near shore or within ports following a disaster or major disruption to local C3 capabilities.

- *Specialized deployable forces.* The Coast Guard will combine its existing specialized deployable forces under a newly created Coast Guard deployable operations command. Referred to (in concept) as the Deployable Operations Group (DOG), this command

[57] HSPD-8 establishes efforts to expand regional collaboration through increased communications and coordination as a national priority. Section 108 of the *Safe Port Act of 2006* also requires the establishment of interagency operations centers for enhancing port security.

[58] *The Federal Response to Hurricane Katrina: Lessons Learned* states that DHS "requires a more systematic and institutional program for homeland security professional development." "Over the long term…professional development and education programs must break down interagency barriers to build a unified team across the Federal government." The White House, *The Federal Response to Hurricane Katrina: Lessons Learned* (Washington, DC: 2006), 73.

will oversee, coordinate, and integrate deployable force packages from all Coast Guard specialized teams (e.g., Maritime Safety and Security Teams, Port Security Units, Law Enforcement Detachments, etc.). These combined specialized teams will provide the Coast Guard with better surge capability and flexibility in emergencies.[59] This command can also coordinate with the managers of other DHS components and government agencies to develop integrated, multi-agency, force packages to address all maritime homeland safety, security, and stewardship threats.[60] Within the deployable operations command, the Coast Guard will continue to develop highly-specialized and trained rapid-reaction forces, such as the Maritime Security Response Team and the National Strike Force, that are capable of responding immediately to potential or actual WMD incidents or extremely hostile threats within the maritime domain.[61]

[59] The *Federal Response to Hurricane Katrina: Lessons Learned* indicates, "there is a compelling need to strengthen operational capabilities across the federal government. Those departments and agencies that have a responsibility to participate in a catastrophic response must build up their crisis deployable capabilities." The White House, T*he Federal Response to Hurricane Katrina: Lessons Learned* (Washington, DC: 2006), 72.

[60] HSPD-5 states that "the Secretary of Homeland Security is the principal Federal official for domestic incident management. Pursuant to the Homeland Security Act of 2002, the Secretary is responsible for coordinating Federal operations within the United States to prepare for, respond to, and recover from terrorist attacks, major disasters, and other emergencies." (Homeland Security Presidential Directive 5 (February 2003). The formation of the Coast Guard Deployable Operations Group will improve operational capabilities within the service and DHS, and will better enable the Secretary of Homeland Security to perform his responsibilities under HSPD-5.

[61] Both HSPD-8 and 2006 DHS Priority Goals identify strengthening WMD detection, prevention, response, and decontamination capabilities as national priorities.

Integrating Coast Guard Capabilities for National Defense

Military and law enforcement operations are integral to the Global War on Terrorism, and the capacity of a single force to execute either mission set offers advantages where threats are uncertain and required responses can change quickly. This is particularly true for homeland security and defense, where the Coast Guard's military and civilian authorities and capabilities enable it to provide a link between DHS and DoD.[62] The Coast Guard, as a military, maritime force with a persistent presence in the U.S. maritime domain, must stand ready for homeland defense.[63] If a threat to America's national security is discovered in the U.S. maritime domain, it is likely that the Coast Guard will be the first maritime force components to respond in defense of the nation.[64]

Internationally, the Coast Guard can provide the Combatant Commanders with presence, access, and influence in nations where humanitarian and constabulary mission skills are most needed. The Coast Guard's experience and expertise, resulting from its civil authorities found within U.S. Code Titles 14, 33, 46, 49, and 50, and military authorities within Titles 10 and 14, and 50 make the Service relevant to the needs of maritime forces in most developing nations. Recognizing its responsibilities and roles as a military service, the Coast Guard must strengthen its interoperability and capabilities to meet national security requirements at home and abroad.

Strengthen the Interface between the Coast Guard and the Department of Defense

The Coast Guard's non-redundant capabilities are exportable to support U.S. national security interests at home and around the globe, and should be ready to serve Combatant Commanders in support of both the *National Security Strategy* and the *National Military Strategy*. To integrate its capabilities more effectively, the Coast Guard will:

- Pursue amendments to Title 14 to bring its wording into alignment with the post-Goldwater-Nichols DoD structure, for the purposes of providing Coast Guard forces to the Combatant Commanders.[65]
- Develop doctrine and strategic plans and policies that integrate the Coast Guard with the DoD, the Combatant Commanders, and the services to ensure that the Coast Guard can respond to the emerging needs of national security, including homeland defense and expeditionary operations.
- Pursue a DHS-DoD Memorandum of Agreement (MOA) to replace the 1995 Department of Transportation (DOT)-DoD MOA that remained operative under the savings provisions upon the creation of DHS. The new MOA will capture the changes envisioned above, formalize more completely DHS recognition of the Coast Guard's domestic and expeditionary roles for national security, and confirm protocols for DHS-DoD connectivity on Coast Guard issues.
- Detail appropriate personnel to the Office of the Secretary of Defense, the Joint Staff, the Combatant

[62] The *MOA between DoD and DHS for DoD Support to the USCG for Maritime Homeland Security* establishes an operational construct for DoD support to maritime security missions under the authority and control of DHS, when exercised through the Coast Guard. Similarly, the *MOA between the DoD and the DHS for the Inclusion of the USCG in Support of Maritime Homeland Defense* establishes the construct for USCG support to DoD maritime homeland defense operations.

[63] *The DoD Strategy for Homeland Defense and Civil Support* provides a strategic concept for an active, layered defense that seamlessly integrates US capabilities to protect the United States from direct attack. Department of Defense, *Strategy for Homeland Defense and Civil Support* (Washington, DC: 2005), 10.

[64] The *Maritime Operational Threat Response Plan*, as required by NSPD-41/HSPD-13, established protocols for coordinating the national response to significant security threats to the United States that occur in the maritime domain.

[65] The *Goldwater-Nichols Department of Defense Reorganization Act of 1986* (PL 99-433) led to improved joint military operations. Under Goldwater-Nichols, each service chief acts as a force provider to Combatant Commanders responsible for a specific function (e.g., Transportation, Special Operations), or a geographic region of the globe (e.g., Europe, North America, etc.) who have command of all assigned DoD forces in their theaters of operation.

Commanders, the Department of the Navy, and other military organizations to increase participation of Coast Guard personnel in support of strategic and operational planning. This participation will focus on ensuring Coast Guard capabilities and expertise are optimally integrated into military operations in support of national security objectives. Similarly, the Coast Guard should include DoD liaison officers in its planning and command and control functions to improve unity of effort in maritime operations.

Expand Cooperation between the Coast Guard and the U.S. Navy

The United States needs Naval and Coast Guard capabilities along its own coasts, on the high seas, and deployed abroad to foreign waters and ports to safeguard its national interests. DoD and DHS can optimize the effectiveness of these assets through a fully-aligned USN/USCG relationship and the development of a global maritime concept of operations. The National Fleet policy[66] provides an initial construct for meeting the spectrum of maritime needs with the forces available to the nation.

Recognizing this, the Coast Guard will fully implement the National Fleet Policy and continue to work with the U.S. Navy to develop a global concept of operations for the employment of the nation's maritime forces.[67] This engagement between the sea services is essential to the successful pursuit of many important initiatives, including:

- Implementing the *National Plan for Achieving Maritime Domain Awareness*.
- Integrating USCG-USN maritime defense operations.
- Establishing joint command, control, and communications (C3) centers.
- Fielding of interoperable equipment and reducing redundancies in the acquisition of new capabilities.
- Participating in joint training programs for expeditionary operations, such as the Naval Expeditionary Combat Command.
- Supporting global maritime partnerships.
- Training, manning, and equipping of patrol boat forces.[68]

[66] The *National Fleet Policy Statement* of March 2006 calls for full cooperation and integration of non-redundant and complementary capabilities between the services in order to meet the expanding range of maritime and naval threats and challenges facing the nation.

[67] In a June 14, 2006 speech at the Current Strategy Forum in Newport, Rhode Island, CNO Admiral Michael Mullen called for a new maritime strategy that redefines the use of sea power and how the sea services will train and operate together to meet the challenges of globalization.

[68] The Coast Guard's current fleet of 119 patrol boats, combined with the law enforcement skills of its military crews, is a foundational component of the nation's ability to conduct effective maritime security operations at home and along foreign shores when necessary. In addition to these vessels, the Coast Guard operates approximately 1,400 boats under 65' in length, most of which are deployed with qualified law enforcement teams.

Developing a National Capacity for Marine Transportation System Recovery

To ensure that the nation has uninterrupted access to the global supply chain, the Coast Guard will lead an integrated planning effort for responding to major disruptions in the Marine Transportation System (MTS).[69] The Coast Guard will work to build resiliency within the MTS by engaging the private sector, establishing government roles, and developing recovery policies, plans, and procedures at the local, regional, and national levels.

Establish the Leadership Role of the Coast Guard

Following major incidents in the maritime domain, the Coast Guard has traditionally regulated navigation and other activities on the water, coordinated efforts to restore waterway usage, mitigated environmental impacts, and ensured the public and private sectors were adequately informed of maritime conditions. The Coast Guard has expertise in maritime recovery operations, broad legal authorities, command and control capabilities, presence in the nation's ports, and longstanding relationships with maritime stakeholders. As Captains of the Port (COTP), Federal Maritime Security Coordinators (FMSC), and Federal On-Scene Coordinators (FOSC), the Coast Guard is well positioned to coordinate the short-term recovery activities that are aimed at restoring the flow of commerce and other critical maritime activities within the ports.[70] With the intent of clarifying roles and providing national leadership, the Coast Guard will:

- Engage government agencies and the private sector to establish roles and responsibilities in maritime recovery.
- Lead the Maritime Modal Government Coordinating Council and continue to encourage the private sector to form a Maritime Modal Sector Coordinating Council in accordance with the National Infrastructure Protection Plan (NIPP).

[69] Both HSPD-8 and the *2006 DHS Priority Goals* identify strengthening information sharing and collaboration for recovery and continuity planning, as well as efforts to secure and enhance the resiliency of critical infrastructure, as national priorities.

[70] The Secretary of DHS delegated the responsibility of developing plans for responding to, and minimizing the damage from a transportation security incident to the Coast Guard (*2003 DHS Delegation No: 0170.1*). The President later reaffirmed this responsibility in the NSMS which identified the Coast Guard as the executive agent for DHS for maritime homeland security, including the coordination of mitigation measures to expedite the recovery of infrastructure and transportation systems in the maritime domain. Section 108 of the *Safe Port of 2006* also designates Coast Guard Captain of the Ports as incident commanders during a transportation security incident, unless otherwise directed by the President.

- Complete the Maritime Modal Implementation Plan in support of the NIPP's Transportation Sector Specific Plan.

Engage with the Private Sector

The Coast Guard has established relationships with the private sector at the port level through its leadership in area planning and advisory committees. Following a port level incident, these relationships allow marine industry representatives to integrate into the Incident Command System, where they provide expertise, information, and resources vital to reestablishing the flow of commerce. For larger scale incidents affecting multiple ports, however, the mechanisms to include the private sector and international trading partners are not as well defined—a gap that significantly reduces the nation's ability to rapidly recover from a catastrophic incident impacting the MTS. Because the marine industry is dynamic and varies in complexity and operations from port to port, the Coast Guard must engage with the private sector to build regional and national level recovery constructs that fully integrate public and private entities. Attaining this level of coordination will strengthen the resiliency of the nation's MTS and ensure continuity of commerce and connectivity to the global supply chain.[71] To accomplish this, the Coast Guard will:

- Integrate national, regional, and local level public and private stakeholders into contingency planning, exercising, and execution of short-term recovery operations.
- Work with the National Maritime Security Advisory Committee (NMSAC) and similar advisory committees to develop effective coordination mechanisms with key organizations and subject matter experts from the various interests within the private sector.
- Work through local interagency committees to identify representative stakeholders, with subject matter expertise, who can coordinate with and advise government decision makers, at all levels, during response and recovery operations.

Develop Recovery Policies, Plans, and Procedures at the National, Regional, and Local Levels

The Coast Guard will work closely with other agencies and maritime stakeholders to develop and implement policies, procedures, and plans for response and recovery operations.[72] Because the MTS is only the maritime portion of the global supply chain, this effort must also clarify the roles of agencies and stakeholders from other transportation modes. The Coast Guard will:

- Continue developing the *National Response Operations Matrix* (NROM). The NROM provides DHS senior leadership with response options that take a measured approach to events without initiating the automatic shutdown of the MTS following a major incident. This methodology must also be used in planning, preparation, and exercise initiatives to ensure the public's safety and the continuity of commerce.
- Coordinate the development of an MTS and inter-modal connector model. This will result in a greater understanding of the MTS, provide a planning tool for the public and private sectors, and help minimize negative impacts to the system.
- Work with the private sector to develop standard methods for identifying alternative and surge capabilities outside impacted ports for handling commerce, as well as local and regional priorities for moving people and cargoes.
- Work with the private sector to develop plans and procedures for assessing impacts, conducting response and recovery operations, and designating safe haven and remote port locations. Plans should also identify pre-established mechanisms for communicating critical information necessary for recovery between all involved entities from the public and private sectors.[73]
- Encourage the owners of vessels and facilities regulated under the *Maritime Transportation Security Act*, as well as the operators of non-regulated critical infrastructure within the ports to develop, maintain, and exercise business continuity plans.

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[71] The NSMS and the *Maritime Infrastructure Recovery Plan* (required by NSPD-41/HSPD-13) highlight the need to assure the continuity of the marine transportation system and to maintain vital commerce in the aftermath of a disruptive incident.

[72] Section 202 of the *Safe Port Act of 2006* requires the Secretary of DHS to develop protocols for the resumption of trade in the event of a transportation disruption or a transportation security incident. In August 2006, the Coast Guard took an initial step toward achieving this objective by holding a National Maritime Recovery Symposium to gather input from a representative sample of maritime stakeholders in the public and private sectors.

[73] "The Department of Homeland Security, working collaboratively with the private sector, should …be able to rapidly assess the impact of a disaster on critical infrastructure. We must use this knowledge to inform Federal response and prioritization decisions and to support infrastructure restoration in order to save lives and mitigate the impact of the disaster on the Nation." The White House, *The Federal Response to Hurricane Katrina: Lessons Learned* (Washington, DC: 2006), 61.

Focusing International Engagement on Improving Maritime Governance

The security, safety, and economic well-being of the United States rely on the sound governance of the world's oceans and on unimpeded global commerce. To advance these interests, the Coast Guard will help shape a coordinated U.S. international maritime engagement strategy that focuses on improving global maritime governance.[74] The Coast Guard will assist the international maritime community in improving the collective governance of the global commons, as well as assist other coastal and port States in improving governance over their own territorial waters. This will involve collaboratively building regimes, awareness, and operational capabilities that strengthen coastal States and the international maritime community.

Develop a Coordinated U.S. International Maritime Engagement Strategy

Historically, U.S. international maritime engagement has focused on building capability through initiatives such as training and equipment transfers. Operational capabilities, however, should support broader national objectives for improving the global governance of the maritime domain. To better shape a coordinated U.S. international maritime engagement strategy for advancing global maritime governance, the Coast Guard will:

- Work with DOS, DHS, DoD, and other agencies to align international maritime engagement efforts in accordance with an agreed upon strategy aimed at improving global maritime governance.
- Demonstrate and promote the value of the Coast Guard's international engagement activities and expertise in support of DHS, the DOS's *International Outreach and Coordination Strategy*, and the Combatant Commanders' Theater Security Cooperation plans.

[74] One of the five strategic actions stated in the NSMS is, "Enhance International Cooperation." Department of Homeland Security, *National Strategy for Maritime Security* (Washington, DC: 2005), 14-15.

Improve International Maritime Regimes

The Coast Guard is a versatile instrument of U.S. foreign policy and moves easily within the interagency, multinational, multilateral world of United Nations-affiliated standards and policy setting organizations. Blending civil, regulatory, and military competencies, the Coast Guard is well positioned to collaboratively advance global maritime governance.[75] For this reason, the Coast Guard will take a leadership role in developing international maritime regimes to promote effective and responsible management of the global maritime domain. The Coast Guard will:

- Work with other U.S. federal agencies and maritime nations to shape mutually beneficial international regimes that will protect the safety, security, and stewardship of the global maritime commons.
- Shape international information sharing and enforcement regimes, infrastructure, and actions to increase the transparency, safety, and security of the marine transportation system and global supply chain.

Build Coastal State Capacity for Maritime Governance

Weak coastal States provide potential havens for terrorists, criminals, and other hostile actors who exploit the maritime domain for drug smuggling, piracy, human trafficking, illegal migration, movement of weapons of mass destruction, and terrorist acts. Weak coastal States often are not able to regulate or provide protection for the legitimate movement and safety of vessels within their waters. They are frequently ill-prepared to safeguard their maritime commerce and energy infrastructure, or protect their marine resources from illegal exploitation and environmental damage. Combined, these vulnerabilities not only threaten their population, resources, and economic development, but can threaten the security of the maritime commons and even the continuity of global commerce.

The Coast Guard's multi-mission nature and expertise position it to help coastal States build the regimes, awareness, and operational capabilities they need. This capacity is reflected in the *Maritime Transportation Security Act of 2002*, which requires the Coast Guard to engage internationally to assess the effectiveness of anti-terrorism security measures in foreign ports. While the Coast Guard is increasingly in a position to help other nations identify gaps and solutions to improve their maritime governance, the demand for Coast Guard assistance far exceeds its current capacity and authorities to conduct international engagement.[76] As a result, the Coast Guard will use a risk management approach to identify where U.S. efforts to improve maritime governance will most effectively advance U.S. national interests. The Coast Guard, in conjunction with other U.S. government agencies, will:

- Assist other coastal States in improving their maritime governance when and where such activities support U.S. national security interests.
- Seek to further expand MTSA authorities to conduct the full range of training required to build partner nations' maritime governance capabilities.[77]
- Seek to expand Coast Guard mandates, authorities, and resources to conduct a strategically driven international engagement program that advances the national security objectives the Coast Guard is best suited and uniquely positioned to achieve.
- Engage in a new dialog with Congress, DoD, and DoS regarding the importance of reestablishing the Caribbean Support Tender concept, to include permanently assigned international crew members, as a proven tool for building and sustaining regional maritime organization capabilities and competencies.
- Raise awareness within Congress and the Administration to gain legislative and budget support for enhanced Coast Guard international maritime engagement activities.
- Work within the international community to establish an updated model for coastal State maritime governance that can be used by any nation.[78]

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[75] The Department of State regularly designates the Coast Guard to lead U.S. delegations to the International Maritime Organization to develop a wide array of international safety, security, and stewardship standards.

[76] Section 202 of the *Coast Guard and Maritime Transportation Act of 2006* expanded the Coast Guard's existing authority to provide technical assistance, including law enforcement and maritime safety and security training, to foreign navies, coast guards, and other maritime authorities. This assistance may be provided in conjunction with regular Coast Guard operations after consultation with the Secretary of State.

[77] The *Maritime Transportation Security Act* currently requires the Secretary of DHS to operate a port security training program for ports that lack effective antiterrorism measures. This authority has been delegated to the Commandant of the Coast Guard.

[78] The Coast Guard published the *Model Maritime Service Code* expressly for assisting coastal States in improving their regimes and infrastructure for maritime governance. Department of Transportation, *The Coast Guard Model Maritime Service Code* (Washington, DC: 1995).

Section V
The Way Ahead

The U.S. Coast Guard is tasked with ensuring the safety, security, and stewardship of the maritime domain. It has accrued these roles over more than 200 years as the organization has evolved along with the country. Throughout its history, the Coast Guard has provided great value to the nation as a military, multi-mission, maritime service that has quickly adapted to America's changing needs. However, most of these adaptations have come after a major catastrophe or event that highlighted gaps in the nation's ability to effectively govern the maritime domain, such as the sinking of the Titanic, *the* Exxon Valdez *oil spill, the 9/11 terrorist attacks, and many others. The Coast Guard must strive to become less reactive, and more proactive and anticipatory in its actions. The Coast Guard must continue to act with strategic intent to address today's threats and challenges, prepare for the challenges of the future, and hedge against future uncertainties.*

This document sets the Coast Guard's strategic course for the future. It has: described the roles of the Coast Guard and their value to the nation; outlined current and future challenges and threats in the maritime domain; described a construct for achieving effective and responsible maritime governance; and described the strategic priorities that the Coast Guard will undertake to help the nation achieve its goals.

The next steps will be to: begin the conversations with maritime stakeholders on improving maritime governance; engage DHS, Congress, and other government agencies to garner support for implementing the strategic priorities; and execute these priorities through the continued development of major initiatives such as Deepwater, Command 2010, Rescue 21, and updated campaign plans. These plans will provide the necessary detail for Coast Guard personnel to best position forces, and most effectively carry out their missions, to address the challenges of an uncertain future and ensure that America's military, multi-mission, maritime service remains Semper Paratus *(always ready), no matter what the future may bring.*

Appendix, Glossary

AIS (Carriage).....Automatic Identification System

C2.....Command-and-control

C3.....Command, control, and communications

C4ISR.....Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance

CMTS.....Committee on the Marine Transportation System

COI.....Community of Interest

COOP.....Continuity of Operations

COP.....Committee on Ocean Policy *(per MDA, 'Common Operational Picture')*

COTP.....Captain of the Port

DHS.....Department of Homeland Security

DoD.....Department of Defense

DOS.....Department of State

DOT.....Department of Transportation

EEZ.....Exclusive Economic Zone

FEMA.....Federal Emergency Management Agency

GOOS.....Global Ocean Observing System

HSPD.....Homeland Security Presidential Directive

IOOS.....Integrated Ocean Observing System

ICS.....Incident Command System

IMO.....International Maritime Organization

ISPS.....International Ship and Port Facility Security Code

JHOC.....Joint Harbor Operations Center

JIATF.....Joint Inter-Agency Task Force

LFA.....Lead Federal Agency

MDA.....Maritime Domain Awareness

MDA-IT .....MDA Implementation Team

MHLS.....Maritime Homeland Security

MOA.....Memorandum of Agreement

MOTR.....Maritime Operational Threat Response

MTS.....Marine Transportation System

MTSA.....Maritime Transportation Security Act

NGO.....Non-governmental organization

NIMS.....National Incident Management System

NOAA.....National Oceanic and Atmospheric Administration

NORTHCOM.....U.S. Northern Command

NRP.....National Response Plan

NSMS.....National Strategy for Maritime Security

OCS.....Outer Continental Shelf

SBI.....Secure Border Initiative

SBInet.....Secure Border Initiative's mix of current and next generation technology, infrastructure, staffing, and response platforms.

UCP.....Unified Command Plan

UDOP.....User Defined Operating Picture

UN.....United Nations

USCG.....United States Coast Guard

USN.....United States Navy

WBIED.....Water-borne Improvised Explosive Device

WMD.....Weapon of Mass Destruction

Photo Credits

22.....Photo of damage to the USS *Cole* following waterborne improvised explosive device attack from a small boat (Courtesy of U.S. Department of Defense)

30.....Graphic courtesy of Integrated Coast Guard Systems

32.....Graphic courtesy of Integrated Coast Guard Systems

41.....Graphic courtesy of John Hopkins University Applied Physics Laboratory

The U.S. Coast Guard Strategy

for

Maritime Safety, Security, and Stewardship

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