



AP PHOTO/US COAST GUARD, PETTY OFFICER 2ND CLASS ETTA SMITH

Building a U.S. Coast Guard for the 21st Century

By Lawrence J. Korb, Sean Duggan, and Laura Conley June 2010

Center for American Progress



Building a U.S. Coast Guard for the 21st Century

By Lawrence J. Korb, Sean Duggan, and Laura Conley June 2010

Contents

- 1 Introduction and summary**
- 7 Fiscal constraints**
- 17 Personnel challenges**
- 23 Defense readiness challenges**
- 29 Coast Guard recapitalization**
- 39 Coast Guard organizational restructuring**
- 44 Preparing for climate change**
- 50 Conclusion**
- 51 Endnotes**
- 54 About the authors and acknowledgements**

Introduction and summary

Our nation today demands more from the U.S. Coast Guard, the nation's oldest maritime force, than at any time in the service's history. Coast Guard personnel and assets are conducting counterpiracy missions in the Gulf of Aden, protecting Iraqi petroleum pipelines and shipping lanes in the Persian Gulf, and shouldering the load in the government's response efforts to the massive Deepwater Horizon oil spill off the coast of Louisiana, the largest oil spill in the nation's history. The Coast Guard remains heavily engaged in all of these theatres in addition to its traditional and better-known search and rescue, drug interdiction, and port security missions.

The accelerated pace and scope of these domestic and international missions is the new norm for the Coast Guard. But if the Obama administration and Congress expect the Coast Guard to maintain its current level of operations effectively, they must begin providing the service with the commensurate leadership and resources necessary to transform and modernize the service. Failure to correct the current imbalance between responsibilities and capabilities will further erode the service's already dwindling ability to carry out its statutory missions, and deny it the ability to protect this nation against 21st century challenges.

In January 2010, the Obama administration decided to freeze all fiscal year 2011 nondefense and homeland security discretionary spending—a category that does not include the Coast Guard. This exemption was believed by many to mean that defense- and homeland security-related funding could increase or at least would remain constant. Yet when the administration's FY 2011 budget proposal was unveiled in February 2010, the Coast Guard's total funding was cut to \$10.1 billion, or nearly 3 percent less than the amount appropriated for the current fiscal year ending September 30, 2010.

If the Coast Guard's budget is authorized and appropriated as proposed, its total budget next fiscal year will be lower than that of next year's total purchase of F-35 Joint Strike Fighters by the Department of Defense—next-generation fighter aircrafts that are not needed in Iraq or Afghanistan.

As a result of an already constrained fiscal environment, the Coast Guard is engaged in making difficult trade-offs even before any further possible cuts to its budget are made. The recently retired Coast Guard Commandant Thad Allen says the service is now shifting funding away from programs that support current operational capacity in order to focus scarce resources on asset modernization and recapitalization programs. This is the same trade-off that confronted his immediate predecessors, Adms. Thomas Collins and James Loy. Meanwhile, the service has lowered its performance goals in anticipation that it will not be able to meet previous standards as a result of major asset decommissionings.

The age and condition of the Coast Guard fleet is already affecting the service's ability to carry out its missions. Take, for instance, the Coast Guard's prominent role in the United States' humanitarian mission in response to the massive 7.0 magnitude earthquake that devastated Port-au-Prince, Haiti on January 12 of this year. Less than 24 hours after the earthquake hit, one of the Coast Guard's largest and most capable cutters, *Forward*, arrived in the Baie de Port-au-Prince to provide crucial command-and-control and search-and-rescue capabilities. Hours later, Coast Guard helicopters and other air assets evacuated the first U.S. citizens from the disaster, and provided much-needed damage assessments while partnering with the United Nation's Stabilization Mission in Haiti to provide transport for its senior representatives.

The Coast Guard was a critical player in the United States' successful relief effort in Haiti, but the service also experienced serious equipment and logistical challenges as a result of the age and condition of its equipment. Twelve of the 19 cutters that were eventually sent to Haiti required emergency maintenance while two of them had to be recalled from operations for emergency dry-dock repairs. Coast Guard helicopters that



In this Jan. 16, 2010 photo released by the U.S. Coast Guard, earthquake refugees stand in line to board a Coast Guard aircraft in Port-au-Prince, Haiti before heading to Homestead, Fla., after an earthquake struck Haiti on Jan. 12. Around 60 people boarded the aircraft, including children and the elderly.

Source: AP Photo/U.S. Coast Guard, Petty Officer Pamela J. Manns

were needed to assist surveillance and rescue missions instead had to be assigned to transport spare parts and equipment to Coast Guard assets in the field.

The deteriorating condition of the service's ships and aircraft, however, is merely a symptom of larger challenges facing the Coast Guard as it attempts to modernize its force, reorient its command structure, improve its defense readiness, and meet future threats, among other key initiatives. More funding is a necessary but insufficient component of a renewed effort to meet these challenges. In order to sustain the Coast Guard's capability over the long term, the service must overcome a host of challenges, including:

- Fiscal challenges
- Personnel challenges
- Defense readiness challenges
- Recapitalization challenges
- Organizational restructuring challenges
- Climate change challenges

The Coast Guard's current situation is not new. The service has a long history of adaptability and resiliency in the face of ever-changing operating and bureaucratic environments and fiscal constraints (see box), but meeting all of these challenges without sufficient budget support is simply not possible.

The oldest U.S. maritime service

The U.S. Coast Guard was formed in 1790 as the Revenue Cutter Service under the Department of the Treasury to enforce tariff and trade laws and to prevent smuggling. The Revenue Cutter Service and the U.S. Life Saving Service merged to form the modern Coast Guard under the Department of the Treasury in 1915. Later, the Coast Guard assimilated the Steamboat Inspection Service, Bureau of Navigation, and U.S. Lighthouse Service.

In 1967 the service was placed under the Department of Transportation, where it remained until the terrorist attacks of September 11, 2001, when the Coast Guard began its transition into a larger bureaucracy, the newly created Department of Homeland Security, or DHS. The modern Coast Guard, or USCG, is one of the nation's five armed services. Like the Army, Air Force, Navy, and Marines, the USCG is comprised of enlisted men and women, officers, and civilian support staff.

The deteriorating condition of the service's ships and aircraft is merely a symptom of larger challenges facing the Coast Guard.

In order to modernize to confront 21st century threats, the Coast Guard must once again adapt to a new bureaucratic environment as well as receive appropriate levels of funding. Should the Obama administration and Congress not help the Coast Guard overcome these obstacles, gaps in the service's capabilities will only be magnified in the future and the men and women of the Coast Guard and the nation will suffer. The following are our recommendations to meet the challenges facing this overburdened service.

Meeting the fiscal challenges

- Create a Unified Security Budget so that policymakers can make appropriate trade-offs in national security spending.
- Immediately increase the Coast Guard's budget by \$5 billion to about \$15 billion a year. Funding should remain level in real terms for at least five years so that the Coast Guard can manage its acquisitions programs rationally.
- Fully fund the Coast Guard's asset recapitalization program while providing appropriate oversight.
- Ensure that the Coast Guard does not have to choose between funding its Acquisitions, Construction, and Improvements account that funds asset recapitalization and its Operating Expenses account that funds its day-to-day operations.
- Evaluate whether to keep legacy assets online until their replacements are adequately tested and ready to serve.

Meeting the personnel challenges

- Restore funding for the military personnel positions scheduled to be eliminated in the Coast Guard's FY 2011 budget request.
- Appoint a top civilian representative for the Coast Guard with responsibilities similar to those of the military service secretaries.

Meeting the defense readiness challenges

- Maintain current readiness reporting standards, which track the ability of Coast Guard assets to participate in wartime missions, until the Coast Guard's new Readiness Reporting System is fully operational.
- Allow the Coast Guard Commandant to become a voting member of the Joint Chiefs of Staff.

Meeting recapitalization challenges

- Ensure that the Coast Guard leadership implements the Acquisition Directorate's goals as laid out in its Human Capital Strategic Plan
- Develop clear progress and performance metrics for the Coast Guard's recapitalization program.
- Require the Coast Guard to provide more comprehensive budget reporting to Congress on all Coast Guard acquisition projects.
- Institute a "fly before you buy" policy for the Coast Guard so that USCG acquisitions are properly tested before the service begins buying them in large quantities.
- Ensure that all Coast Guard programs are in compliance with the Major Systems Acquisitions Manual, a guide for ensuring that major systems acquisitions projects are better managed and executed, provided that they are also in compliance with DHS acquisition directives.

Meeting organizational restructuring challenges

- Move forward with necessary congressional approval for the Coast Guard's command restructuring.
- Develop metrics to ensure that the command restructuring promotes effective allocation of resources and assets across the organization and facilitates the Coast Guard's ability to respond to 21st century threats.

- Consider placing the Coast Guard within the Pentagon as part of the Department of the Navy along with the Marines.

Meeting climate change challenges

- Buy two new polar icebreakers over the next 10 years and invest in a service life extension for the Polar Sea icebreaker in order to maintain U.S. operational capabilities and presence in the Arctic region.
- Ensure Coast Guard budgetary control over the refurbished Polar Star icebreaker in the short term to give the Coast Guard greater control over its Arctic operations.
- Congress should ratify the U.N. Convention on the Law of the Sea to protect and enhance U.S. interests in the Arctic region.
- Complete the Coast Guard's existing recapitalization and command restructuring initiatives in order to enhance the Coast Guard's disaster response capabilities.

As this report will demonstrate, meeting all five sets of challenges is crucial to the defense of our nation and the security and safety of not just our coastal waterways but also Coast Guard operations in international waters.

Fiscal constraints

The Coast Guard has long touted its unofficial motto “doing more with less.” Over the past decade, especially since the attacks of 9/11, it has become an unsustainable reality for a service with multimission responsibilities, encompassing operations that include maritime safety, security, law enforcement, and environmental stewardship. All of these responsibilities have expanded and been in greater demand since the attacks of September 11.

In short, our nation relies on the U.S. Coast Guard more today than ever before. According to the Coast Guard’s Master Chief Petty Officer Charles Bowen, the USCG is increasingly strained because “the men and women of the United States Coast Guard are doing more than we’ve ever asked them to do in more places than we’ve ever asked them to go.”¹ Despite this increased demand, the Coast Guard has a dramatically smaller operations and acquisitions budget, as well as a much smaller number of service men and women than any other military service. By way of comparison, the Coast Guard has fewer people than the New York police force.

Unfortunately for the service and for the country, the Obama administration’s FY 2011 budget request does not reverse the trend of reducing resources while expanding responsibilities. Although the Coast Guard was supposed to be exempted from the Obama administration’s three-year freeze on nondefense discretionary spending, it did not receive the resources needed to meet its 11 statutory missions. In fact, according to the administration’s FY 2011 Homeland Security budget request, the USCG’s total budget will in fact decrease by nearly 3 percent from its FY 2010 funding levels to \$10.1 billion. Moreover, the service’s military ranks will be reduced by over 1,100 billets (naval speak for personnel positions).

These cuts come at a critical time for the Coast Guard. Longstanding budgetary constraints coupled with delayed vessel and aircraft modernization and an expanded mission set are forcing the service to make difficult trade-offs. Accordingly, the Coast Guard is being forced to choose between sustaining current operational capacity or funding its current and future acquisitions priorities.

The Coast Guard’s unofficial motto, “doing more with less,” has become an unsustainable reality for a service with multimission responsibilities.

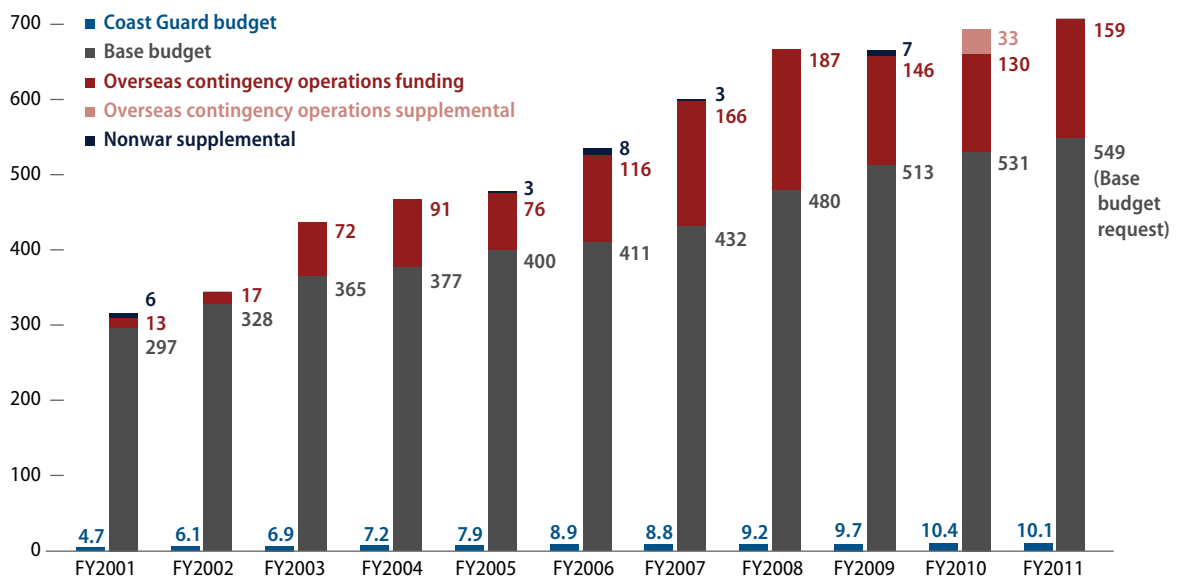
According to the Government Accountability Office, or GAO, the investigative arm of Congress, the Coast Guard is “reducing funds for current assets and missions to increase funds for its ‘top budget priority’ of long-term recapitalization of vessels and aircraft.”²

The Coast Guard’s decision to focus on recapitalization causes some outside experts and Coast Guard leaders to fear that the service will not be able to adequately execute its domestic and international responsibilities. The Coast Guard acknowledged that “due to resource trade-offs, the proposed emphasis on recapitalization of aging assets will come at the expense of current operations and may lead to an immediate decline in mission performance.”³ Indeed, the service has already reduced its drug interdiction performance goals for FY 2011 in part because it lacks the capacity to carry out the same number of interdiction missions as it did in FY 2010.

The Heritage Foundation recently published a position piece on the Coast Guard that purported that “this either/or approach is unacceptable” under any circumstances. We at CAP instead argue that if the Obama administration, the Congress, and DHS expect the Coast Guard to be able to execute its expanded

DOD baseline and warfunding budgets dwarf that of the Coast Guard

Annual defense and Coast Guard budgets, billions of dollars



Notes: All figures are in billions of current dollars. Figures are rounded.

Coast Guard budget source: Information provided by U.S. Coast Guard, June 3, 2010 (Figures include budget authority and supplemental funding for that year)

DoD budget source: Office of the Under Secretary of Defense, Overview - FY 2011 Defense Budget (2010)

mission set, then they must provide the necessary resources and move forward with pending legislative action that would enable the service to operate in a new bureaucratic and operational environment. The only reasonable alternative would be to reduce the number of missions the service is expected to perform and live with the consequences.

Aging Coast Guard surface vessels and aircraft

Close examination of the Coast Guard's aging surface vessel and aircraft fleet reveals that many of the service's most utilized assets are still in operation well beyond their intended service lives. The service's response to January's devastating earthquake in Haiti is its latest large-scale humanitarian mission and illustrates the fact that the service's ongoing recapitalization efforts are much needed. The mission also demonstrated that the Coast Guard's aging fleet is already constraining its ability to carry out its mission effectively and efficiently.

Coast Guard ships were the first to respond to this year's 7.0 magnitude earthquake located just miles away from Port-au-Prince, Haiti. Within 24 hours of the disaster, the Coast Guard cutter *Forward* arrived from Guantanamo Bay, Cuba, to conduct invaluable medical evacuations as well as search and rescue and other needed missions.

But while the USCG played a central role in the U.S. assistance mission in the days and weeks following the earthquake, Coast Guard vessels experienced an exceptional amount of difficulties that hamstrung certain elements of their mission. In fact, most of the 19 cutters that were sent to aid Haitians eventually needed help themselves. Primarily as a result of their age, 12 of them suffered severe problems at sea, and two required emergency dry-dock repairs. Coast Guard commanders were also forced to divert air assets away from evacuation efforts to deliver repair parts to Coast Guard assets.

In the weeks following the USCG initial response to Haiti, former Coast Guard Commandant Adm. Thad Allen stated in his final State of the Coast Guard address that the age and condition of the Coast Guard's fleet is "putting our crews at risk, jeopardizing the ability to do our job." This address, perhaps the former commandant's most ominous statement to date, served to underscore the deteriorating condition of the Coast Guard's aging fleet.



In this Thursday, Jan. 21, 2010, photo provided by the U.S. Coast Guard, the buoy chain is shown splashing into the water as the crew members aboard the U.S. Coast Guard Cutter *Oak* set the second buoy in Port-Au-Prince, Haiti. The buoy was set to mark safe water as ships approach the APN Main Terminal pier.

Source: AP Photo/U.S. Coast Guard, Petty Officer 3rd Class Brandyn Hill

This sentiment is shared at the most senior level of the Coast Guard's enlisted ranks as well. In testimony before the House Subcommittee on Coast Guard and Maritime Transportation in the midst of heavy operations in Haiti, Master Chief Petty Officer of the Coast Guard Charles Bowen stated that "Our people deserve operational assets that are equipped to twenty-first century standards in order to protect our country from various maritime threats. And yet we ask them to work and live on platforms that are years—and in some cases—decades past their designed service lives."⁴ According to Bowen, the "afloat workforce maintain[s] these aging platforms to the best of their abilities and capabilities ... sometimes the age forces lengthy unscheduled maintenance periods, adversely impact[ing] mission execution, or creat[ing] risks to personnel."⁵

Accordingly, the Coast Guard's FY 2011 budget request focuses resources on the service's top budgetary priority—the continued recapitalization of aging assets and infrastructure.⁶ But in order to underwrite and sustain the recapitalization and replacement of these assets while operating in a constrained fiscal environment, the Coast Guard is decommissioning a significant number of surface vessels and aircraft that it would otherwise not immediately retire given proper funding.⁷ This year, the service will decommission:

- Five major cutters (four High Endurance Cutters and one Medium Endurance Cutter)
- Nine aircraft (four HU-25 falcon jets, and five HH-65 Helicopters)
- Five Maritime Security and Safety Teams, or MSSTs—antiterrorism teams established to protect local maritime assets. There will now only be seven MSSTs, down from 12 in FY2010

These decommissionings are the primary reason why the Coast Guard decided to decrease its military workforce by 1,112 positions; fewer operational platforms require fewer service members to operate them. Together, the five MSST decommissionings will decrease the service's operations expenses by \$18.2 million, while the ASSET decommissionings will reduce the Coast Guard's operating costs by some \$59.6 million, for a combined savings of \$78.8 million.⁸

The majority of these funds will be reprogrammed toward the service's equipment recapitalization plan, the much maligned Deepwater acquisitions project, which will be discussed in detail in the Coast Guard recapitalization section below.

Delayed recapitalization leading to loss of current operational capacity

In some instances, new vessels and aircraft meant to replace the assets being decommissioned are not coming online in time to replace this equipment on a 1-to-1 ratio. Such delays are resulting in high maintenance costs for legacy assets and, critically, are beginning to result in diminished operational capacity. As former Commandant Allen warned in testimony before the House Committee on Coast Guard and Marine Transportation in late February 2010, “these capacity shifts could create short-term impacts on Coast Guard service delivery if recapitalization schedules are not met.”⁹

The importance of High Endurance Cutters

The Coast Guard currently maintains 12 “high endurance” cutters, which are 378-foot-long vessels that are considered by many in the USCG to be the heart of the service. This year, the service intends to retire 4 of the 12 cutters that are, on average, 42 years old. This is an exceptionally high age considering the fact that the average Navy ship is only 14 years old. While many of these 12 cutters in commission were modernized through the service’s Fleet Renovation and Modernization Program beginning in the 1980s and ending in 1992, all 12 were commissioned more than 40 years ago and are serving well past their intended service lives.

In order to replace the service’s 12 workhorses, the Coast Guard plans to introduce only eight National Security Cutters in the coming years. These new cutters, intended to be the new flagship vessels of the Coast Guard fleet, will be “capable of executing the most challenging maritime security missions including supporting the mission requirements of the joint U.S. combatant commanders.”¹⁰

While the FY 2011 budget request provides funding to continue the construction of the fifth National Security Cutter, as of this report’s publication only two of the cutters are in service. With four High Endurance Cutters set for retirement in FY 2011, and only two National Security Cutters set to replace them (assuming that both National Security Cutters are fully operational by the end of FY 2011), the House

of Representatives’ Subcommittee on Coast Guard and Maritime Transportation staff noted that “the proposed decommissionings will reduce the total number of cutters in the Coast Guard fleet and yield a concomitant reduction in overall capabilities.”¹¹

As a result of the delays noted above, the service estimates that approximately 5,000 cutter hours will be lost in FY2011 alone. Unfortunately, these operational capacity deficits could continue in the near to medium term as the estimated final asset delivery for the National Security Cutter is currently estimated to be FY 2016, which is 24 months later than the baseline established for the final delivery in FY 2007.¹²

If the service intends to keep older High Endurance Cutters in service beyond their projected decommissioning dates due to delays in the introduction of the National Security Cutters or Offshore Patrol Cutters—the successor to the 270’ Famous class and 210’ Reliance class Medium Endurance Cutter with the ability to launch and recover smaller boats from its stern—then significant “funding will be required for maintenance of the assets that are being replaced. According to a senior official in the Coast Guard’s acquisitions directorate, additional, unplanned funding will be required for a sustainment project to keep the High Endurance Cutters in service longer than anticipated.”¹³ Such a situation, however, would further exacerbate the Coast Guard’s already strained budget.

Coast Guard aircraft assets

The Coast Guard’s aircraft fleet is also aging and in need of modernization. The service intends to retire nine aircraft this coming fiscal year, but in some instances the aircraft that are designed to replace them are not coming online and into service fast enough to fill the gap.

The timeline is “not lining up exactly with the retirement schedule,” acknowledged Capt. Jim Martin, the Coast Guard’s aviation acquisitions chief. He predicts the Coast Guard’s so-called flight hour gap

(the difference between the number of aircraft needed to carry out designated missions and the number of aircraft available to execute the missions) will increase between fiscal years 2011 and 2015.¹⁴

Similarly, according to Martin the Coast Guard still faces a “three-year gap in its airborne maritime patrol flight hours, as the pace of new aircraft slows in the face of budget constraints.” DHS should provide proper oversight to ensure that the Coast Guard is able to fill its airborne maritime patrol flight-hour gap as quickly as possible.

The Coast Guard’s 11 statutory missions¹⁵

Statutory missions	Primary activities and functions
Homeland security missions	
Ports, waterways, and coastal security	<ul style="list-style-type: none"> • Conducting harbor patrols, vulnerability assessments, intelligence gathering and analysis, and other activities to prevent terrorist attacks and minimize the damage from attacks that occur
Defense readiness	<ul style="list-style-type: none"> • Participating with the Department of Defense in global military operations
Migrant interdiction	<ul style="list-style-type: none"> • Deploying cutters and other boats in and around harbors to protect Department of Defense force mobilization operations • Deploying cutters and aircraft to reduce the flow of undocumented migrants entering the United States via maritime routes
Non-homeland-security missions	
Drug interdiction	<ul style="list-style-type: none"> • Deploying cutters and aircraft in high drug-trafficking areas • Gathering intelligence to reduce the flow of illegal drugs through maritime transit routes
Aids to navigation	<ul style="list-style-type: none"> • Managing U.S. waterways and providing a safe, efficient, and navigable marine transportation system • Maintaining the extensive system of navigation aids; monitoring marine traffic through vessel traffic service centers
Search and rescue	<ul style="list-style-type: none"> • Operating multimission stations and a national distress and response communication system • Conducting search and rescue operations for mariners in distress
Living marine resources	<ul style="list-style-type: none"> • Enforcing domestic fishing laws and regulations through inspections and fishery patrols
Marine safety	<ul style="list-style-type: none"> • Setting standards and conducting vessel inspections to better ensure the safety of passengers and crew aboard commercial vessels • Partnering with states and boating safety organizations to reduce recreational boating deaths
Marine environmental protection	<ul style="list-style-type: none"> • Preventing and responding to marine oil and chemical spills • Preventing the illegal dumping of plastics and garbage in U.S. waters • Preventing biological invasions by aquatic nuisance species
Other law enforcement (foreign fishing enforcement)	<ul style="list-style-type: none"> • Protecting U.S. fishing grounds by ensuring that foreign fishermen do not illegally harvest U.S. fish stocks
Ice operations	<ul style="list-style-type: none"> • Conducting polar operations to facilitate the movement of critical goods and personnel in support of scientific and national security activity • Conducting domestic icebreaking operations to facilitate year-round commerce • Conducting international ice operations to track icebergs below the 48th north latitude

Although the Coast Guard's current operational capacity has already been diminished as a result of its aging fleet—and could be further weakened due to delayed recapitalization—its responsibilities enshrined in its mission have only taken on increased significance and demand, especially since 2001. Currently the service is responsible for 11 missions, including homeland security and non-homeland-security tasks (see table).

The Coast Guard measures its ability to accomplish these 11 statutory missions every year by stating whether or not it met its performance goals. A goal (also known as a strategic goal or objective) “constitutes a specific set of policy, programmatic, and management objectives for the programs and operations covered in the strategic plan, and serves as a framework from which the annual objectives and activities are derived. Performance measures are particular values for characteristics used to measure output or outcome of activities, objectives and goals.”

The Coast Guard managed to meet all performance goals in only 6 of its 11 statutory mission areas in FY 2009. But the service managed to meet 19 of 27 overall performance goals.¹⁶

GAO recently alluded to this underperformance. It noted that “the Coast Guard faces continuing problems in balancing homeland security and more traditional missions, such as law enforcement and marine safety.”

In order to avoid a significant drop-off in service delivery due to lack of capacity, the Coast Guard preemptively lowered its performance targets for the current fiscal year. “For example, the Coast Guard has lowered from 18.5 percent in FY 2010 to 15.5 percent in FY 2011 the targeted removal rate for cocaine from non-commercial vessels in maritime transit.”¹⁷ So while performance targets might be met on paper in the next fiscal year, the service's real effectiveness on the ground will actually decrease.

This revelation prompted Rep. Elijah E. Cummings (D-MD), chairman of the Subcommittee on the Coast Guard and Maritime Transportation, to note in a recent hearing that “in plain English, according to the Coast Guard's own performance measures, reduced patrol hours will likely mean that fewer drugs will be interdicted at sea. Other performance indicators have also been lowered.”¹⁸ This could leave a critical seaborne vulnerability at a time when the United States is ramping up its effort to assist the Mexican government in its fight against the drug trade and related gang violence.

The Coast Guard faces continuing problems in balancing homeland security and more traditional missions, such as law enforcement and marine safety.

The Coast Guard is quick to note that its Operating Expenses, or OE account, which supports all of the Coast Guard's missions and workforce, actually increased in its FY 2011 budget request by nearly \$87 million. But this is an increase of only 1 percent over the previous fiscal year.

Moreover, close examination of the increase reveals that the vast majority of the additional funds will be consumed by payments to its existing workforce rather than being programmed to increase the service's operational capacity. The Subcommittee on Coast Guard and Maritime Transportation staff notes that, "the majority of the increase is attributable to the annualization of the FY 2010 pay increase, the FY 2011 pay increase, and military allowances."¹⁹

Recommendations

Create a Unified Security Budget

Despite the critical role the Coast Guard plays in defending our national security and the many challenges it must overcome in order to do so, under President Obama's FY 2011 budget proposal the Coast Guard's budget will decline by 3 percent to \$10.1 billion. This will mean that the Coast Guard's entire budget will be smaller than some agencies in the Department of Defense like the Missile Defense Agency, which operates outside the Pentagon's armed services. Although most missile defense programs have yet to be successfully tested under realistic conditions, missile defense will receive more funds in the proposed 2011 defense budget than the entire Coast Guard.

In order to confront threats to global security and stability most efficiently and effectively the Obama administration must first create a Unified Security Budget, or USB, to address the imbalance between key elements of our national power. A USB aggregates all categories of national security funding in order to enable policymakers to more readily identify the trade-offs necessary between the many agencies and programs devoted to national security. This is the best vehicle to prepare the U.S. government to confront the threats of the 21st century.

Under a unified budget, savings garnered by cuts in a defense program could be easily moved to finance a homeland security priority. For instance, part of the Navy's \$16.1 billion shipbuilding budget for 2011 includes an extra \$2.7 billion

for a second Virginia-class submarine, an arguably unnecessary expense in the post-Cold War world. That money could help the Coast Guard buy new ships before large parts of its current fleet are forced into retirement.

Immediately increase the Coast Guard budget by \$5 billion

Congress should increase the Coast Guard's budget by \$5 billion per year to about \$15 billion a year. Funding should remain level in real terms for at least five years so that the Coast Guard can manage its acquisitions programs rationally.

Fully fund the Coast Guard's asset recapitalization program with appropriate oversight

As the service's response to the Haiti earthquake demonstrated, the Coast Guard's aging fleet is already severely crimping its operational capacity. As noted above, this capacity deficit is likely to increase in the future should the service's new assets not come on line according to their current schedule.

Therefore, the service must move forward with its asset recapitalization plan while providing increased oversight at all stages in the procurement process (more details on necessary oversight measures will be discussed in the Coast Guard recapitalization section). But funding for the modernization program should not come at the expense of current operational capacity. Instead Congress should adhere to two principles:

Don't raid one Coast Guard account to fund another account

The Coast Guard must not be forced to choose between funding its Acquisitions, Construction, and Improvements, AC&I account, which funds asset modernization, and its Operating Expenses, or OE account, which funds its day-to-day operations.

The Coast Guard should not have to choose between reducing funds for current assets and missions to increasing funds for its asset modernization program, which it concedes is its main budget priority. Coast Guard leadership should work with the Congress to identify budgetary gaps in the service's FY 2011 budget that will affect the service's operations and ensure that those gaps are filled.

Evaluate whether to keep legacy assets online until their replacements are adequately tested and ready to serve

Congress should approve additional funding for legacy assets if it first determines that keeping the Coast Guard's legacy assets online until their replacements are adequately tested and ready to serve is in the national interest.

The Coast Guard announced that it will decommission five cutters and nine aircraft. This despite the fact that former Commandant Thad Allen submitted a list to the Senate this year that stated that given proper funding, he would keep two High Endurance Cutters, five HH-65 Helicopters, and four Maritime Safety and Security Teams in service.

The Obama administration and Congress should evaluate whether it is in the national interest to provide this funding through the regular budget or a one-time supplemental to keep these legacy assets online but only after evaluating whether the capacity gained outweighs the financial cost of keeping these assets operational—given their inordinate maintenance costs due to their age.

Personnel challenges

Since the beginning of the U.S.-led wars in Afghanistan and Iraq, the Pentagon has expanded the Army and the Marine Corps, the services most utilized in both conflicts, by more than 100,000 men and women.²⁰ This significant increase was designed to ease the stress on the ground forces, which were routinely experiencing repeated deployments without receiving the minimum time at home to rest, recuperate, and retrain as proscribed by the Pentagon's own regulations.

Over the same period, the Coast Guard's active-duty component grew from about 42,600 active-duty military and full-time civilian personnel in fiscal year 2001 to nearly 52,000 active-duty military and full-time civilian personnel for FY2011. This increase did not extend, however, to the Coast Guard's auxiliary and military selected reserve force levels, which on average remained relatively stagnant over the same period.²¹

More importantly, as will be discussed in the following pages, anecdotal evidence as well as GAO analysis suggest that the increase has not been nearly enough to support the USCG's missions, which have been significantly expanded since 2001. As a result, the Coast Guard has struggled to fulfill both homeland security and non-homeland-security missions over the past decade.

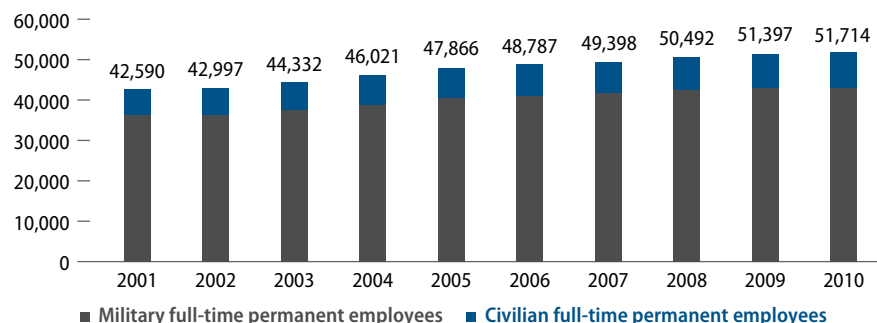
Adm. Allen alluded to this manpower deficiency in his 2008 testimony before the House Committee on Appropriations Subcommittee on Homeland Security. The then-commandant remarked that "the spectrum of threats, hazards, [and] challenges we face continues to grow on all fronts and increases our demand for services." He pointed to the USCG's greatest internal challenge as "a bona fide capacity shortage."²² As noted above, DHS's FY 2011 budget request will reduce Coast Guard end strength below 49,000.²³

If the Coast Guard is to continue to serve as an effective complement to U.S. security operations overseas; perform its traditional maritime transportation, environmental, and safety missions; and prepare its force for the impact of future threats

such as those posed by climate change, then increasing or at the least maintaining Coast Guard personnel levels must be a priority in the near term (see chart).

Increasing or at the least maintaining Coast Guard personnel levels must be a priority in the near term.

U.S. Coast Guard full-time permanent employees



Source: U.S. Coast Guard

Personnel levels and performance

The Coast Guard in 2001 began to experience a series of personnel shortages in its traditional operations and key homeland security missions, as well as ongoing issues with maintaining adequately trained personnel. Coast Guard leadership must ensure that the service recruits and maintains the appropriate level of personnel to meet its statutory mission needs without lowering its quality standards.

The history of USCG civilian and uniformed personnel shortages covers the breadth of the service's missions. Steve Caldwell, director of maritime security issues for GAO, noted in 2008 that the GAO "looked at acquisition, domestic facilities inspections, the overseas port inspections that the Coast Guard does... Every one of those areas we found that there were problems with not enough staff to do the work."²⁴

In 2006, for example, one year before the Coast Guard reclaimed control of the Deepwater acquisition program from private contractor Integrated Coast Guard Systems, the DHS inspector general noted that the Coast Guard did not have adequate staff reviewing contractor information technology systems work for the program. The IG was told the Coast Guard did not have enough personnel to consistently review information technology systems plans within the 30 days allotted by the contractors.

As a result, the IG concluded that “by the time it reviews the documents, the companies may have moved ahead with their plans, leaving the agency to accept the work or try to change it at additional cost.”²⁵ Despite these manpower deficiencies the service assumed control of the Deepwater program, for which it was not prepared, with disastrous results.

(See the Coast Guard recapitalization section below for details on the Deepwater program.)

Critical capability deficiencies and quality gaps

The USCG is also experiencing staffing shortages in key homeland security missions. In 2008, for example, the GAO reported the Coast Guard was unable to meet its own requirements for escorting tankers carrying liquefied natural gas or crude oil into U.S. ports.²⁶ Al Qaeda has indicated in the past that LNG tankers are a potential target,²⁷ and a May 2005 report by Good Harbor Consulting, which evaluated a hypothetical terrorist attack against LNG tankers and infrastructure in a U.S. port, found that “there appears to be a high risk that catastrophic damage could occur if a large breach were made in the urban LNG facility’s tank, if three of five containers aboard the LNG tanker were breached, or if an attack occurred involving both the facility and the tanker during unloading.”²⁸

GAO noted in 2008 that the Coast Guard was considering both shifting resources to units where LNG responsibilities were on the rise and requesting additional funding “to support the acquisition of additional boats and personnel to conduct vessel escorts and infrastructure patrols and the training of additional personnel.”²⁹ According to the Federal Energy Regulatory Commission, as of April 2010 the United States currently has 11 LNG terminals,³⁰ with another 22 approved but not yet built,³¹ and an additional 7 proposed.³² Because of this exponential growth, it will be particularly important to ensure that the Coast Guard has adequate personnel to coordinate and perform vessel escorts.

As noted above, the USCG has also experienced issues in the past with fulfilling its domestic facility inspection duties, which comprise an important segment of its homeland security responsibilities. Such inspections are designed to determine whether more than 3,000 U.S.-based cargo terminals, factories, chemical plants, and power plants near ports, and waterways have designed and implemented adequate security plans and procedures.

In 2008, the most recent year for which information is available, the Coast Guard contended that it had sufficient personnel to conduct facility inspections. GAO, however, noted that the USCG's personnel estimates for 2008 did not account for two key issues. First, some inspectors were also tasked with other duties, thus limiting the time available to conduct inspections. Second, at the time of the report the Coast Guard was in the process of issuing new guidelines for inspections, which the GAO suggested could lead some inspectors to spend more time performing their duties. Based on these factors, the GAO recommended that DHS and the USCG "reassess the adequacy of resources for facility inspections."³³

The Coast Guard has also experienced problems with maintaining sufficiently qualified staff for its critical Marine Environmental Protection mission. For example, in November 2007, the M/V Cosco Busan, an oil tanker operated by Fleet Management Ltd., hit a bridge support in the San Francisco Bay, causing 53,653 gallons of fuel oil to be released into the water. While this spill was tiny in comparison to the current difficulties with the underwater well off the coast of Louisiana drilled by the Deepwater Horizon platform, the Coast Guard experienced difficulties responding to this limited incident.

The DHS Office of the Inspector General reviewed the Coast Guard's response to the incident in the San Francisco Bay and found that "all three of the individuals who responded to the Cosco Busan were unqualified as marine casualty investigators."³⁴ Perhaps as a result, the House Transportation Committee's Subcommittee on Coast Guard and Maritime Transportation found that the unqualified inspectors "failed to identify, collect, and secure perishable evidence related to this casualty."³⁵

Moreover, according to a Coast Guard report on the incident, the service's initial pollution investigators did not accurately gauge the amount of oil spilled from the Cosco Busan. The report notes that the low incidence of significant oil spills in the United States prevents inspectors from gaining vital real-world experience in estimating spills. It acknowledges, however, that "while it is not certain how much the early response would have changed knowing the true volume spilled, certainly it would have helped alert stakeholders in the San Francisco Bay area ... [that] this was going to be a large scale response."³⁶ It is too early in the clean-up efforts in Louisiana to assert whether the Coast Guard has been able to provide sufficient numbers of adequately trained personnel to assist in the investigation and cleanup.



House Speaker Nancy Pelosi, center left, walks with Congressman George Miller, second from right, and U.S. Coast Guard Admiral Craig Bone, near the beach where oil spilled into the San Francisco bay while touring Crissy Fields in San Francisco, on Monday, Nov. 12, 2007.

Source: AP Photo/Jeff Chiu

While this evidence is anecdotal, GAO and other agencies have noted ongoing problems with the Coast Guard’s “personnel resource allocation, personnel readiness, qualifications, and training.”³⁷ The Coast Guard has also observed personnel interoperability problems between its Pacific Area Command and Atlantic Area Command as detailed in the organizational restructuring section of this report.

According to GAO, the USCG is aware of its personnel shortfalls and is developing several tools to address them through command structure changes, and service-wide initiatives. Specifically, the Coast Guard has developed the Workforce Action Plan and FORCECOM Business Plan. As outlined in the command restructuring subsection, the former is intended to “ensure that the Coast Guard better align its human capital program with current and emerging mission requirements, and facilitate the development of long-term strategies for acquiring, training, and retaining needed staff” although GAO noted that, among other problems, it failed to include a “gap analysis” identifying personnel needs in specific mission areas.³⁸

The business plan is intended to improve readiness of USCG operational personnel by standardizing training and personnel requirements. But both the workforce and business plans are relatively new, and the USCG has not yet completed their implementation. Beyond concerns about deficiencies in the workforce plan, GAO has expressed concerns about whether the USCG has adequate personnel to implement the new personnel planning efforts (a somewhat ironic state of affairs) and whether the budget will permit additional personnel needs to be filled if identified.³⁹

Recommendations

Restore funding for the military personnel reductions included in the Coast Guard’s FY 2011 budget request

The USCG’s FY 2011 budget request reflects the fiscal constraints that all federal agencies are confronting this year. Among the measures recommended by former Commandant Allen is a reduction of USCG military personnel by 1,112 positions. This reduction will be partially offset by increasing the USCG civilian workforce by 339 persons, a decision that the House Transportation Committee noted “is attributable to the conversion of positions from military to civilian positions and the need for new civilian positions to support new assets.”⁴⁰

Given that the Coast Guard is implementing new servicewide workforce and business plans to address its historical personnel problems, reducing the staff before the programs are fully operational is unwise. In the fiscal constraints section of this report, we recommend that Congress evaluate whether it should maintain funding for Coast Guard legacy assets that are slated for decommissioning. Should the Congress decide to maintain funding for these assets, it should also maintain funding for the service members needed to operate them.

Re-evaluating these cuts makes sense in light of the Coast Guard's mission demands and its efforts to resolve its personnel problems. Congress can revisit the appropriate force size after GAO is able to evaluate the Coast Guard's new personnel plans. Ideally the Coast Guard would aid this process with a complete gap analysis.

[Appoint a top civilian representative for the Coast Guard with responsibilities similar to those of military service secretaries](#)

The nation's other armed services are headed by a civilian secretary and a military commandant (Marines), chief of staff (Army and Air Force), or chief of operations (Navy). While the USCG normally falls under the jurisdiction of the secretary of homeland security, with the potential to serve under the secretary of the Navy in wartime, neither of these civilian leaders is or can be focused solely on the needs of the USCG.

Given that the commandant of the Coast Guard is the only service chief who actively commands the operations of his area commanders,⁴¹ but also has responsibility for the day-to-day functioning of the service, Congress should evaluate whether separating these functions would result in improved readiness.

We believe that this historically underresourced service would benefit from a high-level civilian political appointee who would report to the Secretary of Homeland Security. This official would make the case for the Coast Guard to Congress, DHS, and DOD, particularly on personnel and budget issues, as do the secretaries of the Army, Navy, and Air Force. This position could be based on the model of the existing service secretaries. The civilian secretary of the Army, for example, has statutory authority to conduct recruiting, organizing, supplying, equipping, training, maintaining, and a host of other duties for the Department of the Army.⁴² The exact balance of responsibilities between the U.S. Coast Guard commandant and a new civilian secretary or undersecretary should be determined by consultation with the USCG.

Defense readiness challenges

The Coast Guard plays a critical role as a naval reserve force to support the Department of Defense in the event of major conflict. Although the Coast Guard has not operated under the jurisdiction of the Department of the Navy since World War II, the USCG is officially one of the nation's five armed services and saw action in the Korean and Vietnam Wars. In addition to its work supporting the Navy during wartime, the Coast Guard “also has command responsibilities for the U.S. Maritime Defense Zone, countering potential threats to America's coasts, ports, and inland waterways through numerous port-security, harbor-defense, and coastal-warfare operations and exercises.” The service also conducts training and joint operations with foreign military forces.⁴³

The Coast Guard plays a comparatively modest but necessary role in U.S. military operations in Iraq, and continues to perform key counterpiracy missions in the Gulf of Aden. The service deployed a peak of 1,250 personnel overseas to support U.S. operations in Iraq, where they provided security for ports in Iraq, Kuwait, and Bahrain and oil terminals in the Persian Gulf, among other duties. The service points out that it was the first to capture maritime enemy prisoners of war during the conflict. The Center for Naval Analyses notes that the Coast Guard was of particular use in the littoral areas of the North Persian Gulf, where the water was too shallow to accommodate most Navy vessels. USCG also played a major role on the homefront by providing security for out-loading U.S. military material leaving for the Persian Gulf.⁴⁴

Yet despite its multimission agenda both at home and abroad in the Persian Gulf and the Gulf of Aden, as well as other areas, the Coast Guard struggles to meet its own defense readiness performance goals. As the United States continues to develop its homeland security and offensive capabilities to meet 21st century threats, the Coast Guard must be able and prepared to meet 100 percent of its defense-related responsibilities.

Defense readiness reporting

As one of the nation's five armed services, the Coast Guard has a statutory requirement to stand ready to defend the country at home and abroad, whether under the authority of DHS or the Department of the Navy. Yet the service's yearly performance reporting makes it clear that our nation's oldest sea service is perennially stuck at suboptimal levels of defense readiness.

The Coast Guard reports readiness, quantified as a percentage, as the amount of time an asset can either meet or exceed a "C-2" readiness standard, meaning it can "undertake most of the wartime missions for which it is organized or designated." The service procedures are based on the Status of Readiness and Training System, which operates on a C-1 to C-5 scale, with C-5 indicating that an asset or unit is not prepared to meet its wartime mission, and C-1 indicating that it is fully prepared.⁴⁵

The USCG reported in FY 2008 that only 56 percent of its assets "identified in DOD Combatant Commander operational plans" were rated at least C-2, far short of its target readiness level of 100 percent. The USCG missed this 100 percent C-2 readiness target each year going back to FY 2001.⁴⁶ DHS noted that the service's FY 2008 overall readiness percentage rating did show a mild (5 percent) improvement over the FY 2007 readiness levels, but serious deficiencies still remain.

Moreover, in FY 2008 the Coast Guard met none of its remaining three performance targets related to its defense readiness mission. In that fiscal year, the USCG's best performing defense assets were its patrol boats, which recorded 95 percent readiness (five percentage points short of the target), an underperformance that the IG attributed "in large part to aging of the hulls and mechanical systems [because] many assets are more than 20 years old and are beyond their intended service lives."⁴⁷

The C-2 readiness of other Coast Guard units is well below acceptable standards. The service's Port Security Units, which are quickly deployable units designed to provide security, escort, and other services in the United States or abroad, reported only 24.45 percent readiness in FY 2008, far short of their 100 percent readiness goal. DHS attributed the significant underperformance to skill and training deficiencies, as well as "limited equipment and fuel funding," among other issues.⁴⁸

Finally, in FY 2008 the Coast Guard measured its defense readiness performance in terms of the readiness of its High Endurance Cutters, the 378-foot-long vessels that are considered by many in the USCG as the heart of the service. These vessels fared somewhat better than the service's Port Security Units, but still met readiness requirements only 47 percent of the time.⁴⁹ The Coast Guard's especially old High Endurance Cutters are set to be gradually decommissioned as the new National Security Cutters come online. But as noted in the fiscal challenges section, the service is experiencing overall capability gaps as the National Security Cutters are not coming online quickly enough to replace the High Endurance Cutters on a one-to-one basis, a process which may further depress defense readiness in the short term. Moreover, while all 12 of the High Endurance Cutters will be decommissioned in the coming years, only eight National Security Cutters will replace them.

Overall defense readiness declined precipitously from FY2008 to FY2009. In FY2009, the Coast Guard's overall defense readiness declined to 44 percent of designated assets able to meet the C-2 readiness level. GAO reports that the Coast Guard explained the drop in performance as attributable "to reduced High Endurance Cutter readiness and personnel and training shortfalls."⁵⁰ Given the military personnel cuts necessitated by the service's FY 2011 budget request, it seems unlikely that the personnel and training issues will be corrected any time soon.

Patrol boat defense readiness declined only slightly over the FY 2008 to FY 2009 period, dropping from 95 percent to 94 percent. But the worst-performing units from FY 2008 declined significantly. The readiness of Port Security Units, for example, dropped almost five percentage points to 19.8 percent readiness in FY 2009. The goal of 100 percent readiness for High Endurance Cutters was also missed by a significant margin: The USCG reported 20.7 percent defense readiness in the last fiscal year. While FY 2010 readiness data is not yet available, data from the previous two years make it clear that the service's readiness for this portion of the Coast Guard's activities is declining.⁵¹

U.S. Coast Guard defense readiness performance

	2004	2005	2006	2007	2008	2009
Percent of time that designated assets met C-2 readiness level	76%	67%	62%	51%	56%	44%
Defense readiness of High Endurance Cutters	98.5%	99.5%	84.2%	47.0%	47.0%	20.7%
Defense Readiness of Patrol Boats	n/a	n/a	100%	100%	95%	94%
Defense Readiness of Port Security Units	29%	1.5%	1%	4.5%	24.5%	19.8%

Source: Government Accountability Office, "Observations on the Request Fiscal Year 2011 Budget, Past Performance, and Current Challenges," available at <http://www.gao.gov/new.items/d10411t.pdf>

These ratings should be understood within the context of the operating environment facing the USCG today. The service is amid a major acquisition program that the DHS's Office of Inspector General noted would help to address patrol boat readiness in the future. Moreover, the nation's other military services also faced readiness problems over the past decade.

A 2008 report by the Congressional Research Service notes that, "According to reports, current Army readiness rates have declined to the lowest levels since the end of the Vietnam war with roughly half of all Army units, both active and reserve, at the lowest readiness ratings for currently available units."⁵² These low rates point to a broader issue with defense readiness when U.S. forces are overextended.

Moreover, defense readiness represents a relatively small part of the Coast Guard's overall mission. Case in point: The percent of overall USCG mission hours devoted to defense readiness in FY 2008 was only 5.75 percent. Thus, it might be viewed by some as acceptable to achieve lower readiness in that area than in those comprising the bulk of the USCG missions, such as time spent on the ports, waterways, and coastal security mission, which occupies 27.71 percent of USCG mission hours.⁵³

Defense readiness, however, is one of the Coast Guard's 11 statutory missions—and the one most explicitly related to its work as a military service. Even taking into consideration the USCG's excellent work supporting U.S. efforts in Iraq and other worldwide efforts, the service should be expected to show consistent improvement in defense readiness and attain readiness levels that might not meet the ambitious 100 percent target but certainly do not sink as low as the Port Security Units have fallen over the past few years.

According to GAO, the Coast Guard has retired its old defense readiness measures and will introduce new measures for FY 2011. The old performance targets will reportedly be "replaced with similar Status of Resources Training System-based readiness measures that employ different methodology to better reflect readiness of all the Port Security Units and the entire fleet of patrol boats and High Endurance Cutters."⁵⁴ While more accurate measures would certainly facilitate national defense and homeland security planning, even this step is not without problems. DOD is phasing out SORTS in favor of the newer, capability-based Defense Readiness Reporting System, which begs the question of why the USCG

does not simply develop FY 2011 performance targets based on the new DOD system. Indeed, a Coast Guard memorandum from April 2009 reveals that the service has been planning for this transition for some time.⁵⁵

Recommendations

Maintain current readiness reporting standards until the Coast Guard Readiness Reporting System is fully operational

A November 2009 DHS inspector general's report indicated that the USCG was working to develop a Coast Guard Readiness Reporting System that would be in alignment with DOD's new Defense Readiness Reporting System. Until that system is implemented, however, "the Navy has agreed to keep the Status of Resources and Training System, or SORTS, functional so that Coast Guard assets can continue to report readiness to Department of Defense commands."⁵⁶

Developing new methodology for the FY 2011 measures based on SORTS, as GAO indicated is the case, thus appears to be an unnecessary undertaking. Speeding development of the Coast Guard's new system would be a better use of resources than developing new performance targets for an obsolete system. The USCG should maintain current readiness reporting standards until the new system is operational.

Allow the Coast Guard commandant to become a voting member of the Joint Chiefs of Staff

All of the nation's armed services housed in the Department of Defense—the Army, Air Force, Navy, and Marine Corps—are voting members of the Joint Chiefs of Staff. This council of military advisors has traditionally not included the Coast Guard commandant, even though the USCG is a military service and can be tasked to support the Navy when it is conducting combat operations as it has done in Korea, Vietnam, and the two Persian Gulf wars.

Given the key role of the Coast Guard in homeland security, an area which is an increasingly important component of U.S. national security, as well as its support of U.S. interests and operations overseas, this arrangement does not give full respect to the Coast Guard's ability to contribute to our national defense.

Instead, it limits the perspectives of the policymakers who rely on the Joint Chiefs of Staff as their primary source of military advice and undermines the ability of the commander in chief to hear directly from a military officer with key national security responsibilities.

Just as the Obama administration has integrated the Homeland Security Council into the National Security Council, so too should the Coast Guard commandant be integrated into the JCS system. At a time when we are engaged in a war with groups such as Al Qaeda and the Taliban, this step would give policymakers more information about the capabilities of all of our armed services. It would also raise the profile of the USCG's defense readiness mission, putting pressure on the Coast Guard and policymakers to work together to improve the readiness of the service's strategic assets, and ensure that the Coast Guard receives its fair share of the national security budget.

Coast Guard recapitalization

When Adm. Thad Allen became the 23rd Commandant of the Coast Guard in 2006, like his immediate predecessors over the past decade he ordered the service to undertake a major review of the need to modernize the Coast Guard's aging fleet and the need to create an acquisition directorate to be able to manage major acquisition programs in order to become the Coast Guard's own lead systems integrator. (The review also encompassed restructuring the way the service went about organizing and deploying its forces, a subject that will be discussed in the following section). The overall framework for the program was issued in 10 Commandant Intent Action Orders released in 2006. Coast Guard leadership then consolidated the 10 Action Orders into five interdependent Modernization Efforts after realizing that the 10 orders could not be implemented independently of one another.

The recapitalization portion of this plan incorporated the service's massive (then) four-year-old asset modernization program, known as Deepwater, and also sought to overhaul its beleaguered acquisition and financial management system.

It was an ambitious plan for a service that had seen the scope of its responsibilities increase considerably since 2001. Lessons learned in the Coast Guard's response to September 11 and Hurricane Katrina gave new impetus to the modernization plan. These operations "highlighted the need for enhanced standardization across the service and more centralized logistics and asset management,"⁵⁷ another centerpiece of the modernization program. Ultimately, the service saw the program as a means to enhance overall Coast Guard performance, improve coordination, and continue its tradition of adaptability in order to carry out its traditional and homeland security duties.



Coast Guard Adm. Thad Allen, 2006.

Source: AP Photo/Nicole LaCour Young

As Commandant Allen's term came to an end in May 2010, the recapitalization portion of the program displayed mixed results. Its Deepwater acquisitions program was so poorly run and managed that by 2007 the Coast Guard had to fire its lead systems integrator and took over the program itself. In order to do so, the Coast Guard stood up its own Acquisitions Directorate in 2007.

The Coast Guard has undertaken a major effort to reform and modernize its acquisitions enterprise since 2007. The consolidation of staff elements within the Acquisitions Directorate, known commonly as CG-9, has enhanced the Coast Guard's ability to manage its multibillion dollar investment programs and put the Coast Guard on a more stable footing to become the lead systems integrator for major acquisitions. While the Coast Guard is making strides toward developing the functional capabilities necessary to contract and manage the costs, schedules, and performance measures of its most complex acquisition programs, several problems remain.

Since taking over from Integrated Coast Guard Systems, a joint venture of Lockheed Martin and Northrup Grumman, the Coast Guard has not been able to develop the internal capacity necessary to administer its own acquisition process and financial management effectively and efficiently.

In many cases, the Coast Guard has identified its own deficiencies with regard to acquisition and financial management. Steps to correct these shortcomings are now articulated by its own Acquisitions Directorate but must receive continued support and resources from the leadership of the Coast Guard, DHS, and Congress in order to see that they are implemented.

Similarly, the Coast Guard did an exemplary job of performing the necessary interim steps to carry out its organizational restructuring, but it has yet to receive approval from Congress to implement these changes. The reason: USCG has yet to effectively communicate the urgent need for its reorganization (these subjects will be discussed in the section below). Both efforts must receive new momentum if the Coast Guard is to have the capacity to execute its expanded mission set now and in the future.

Acquisition and financial management

Former Commandant Thad Allen put it well when he stated recently that, “In general, long-term Coast Guard performance ultimately depends on the pace and stability of future recapitalization, which in turn depends on our ability to manage the cost, schedule, and quality of our acquisition programs.”⁵⁸ While some cost increases of late result from inflation and exchange rate increases, many others are the result of an acquisitions directorate that is in the process of improving its effectiveness. Unfortunately, the Coast Guard has recently proven that it is currently unable to execute all its necessary functions independently. This inability is affecting the Coast Guard’s current and future capacity to meet the demands of its mission.

The inability to manage large-scale acquisitions projects effectively and efficiently internally is not only a Coast Guard problem, but a problem that is shared throughout the Department of Defense more generally. A detailed review of the Coast Guard’s acquisition and financial management deficiencies is nonetheless necessary to cure this problem, which has thus far prevented the service from acquiring the platforms it needs to execute its current and future missions in a timely and cost-efficient manner. In this section we unpack this problem into three buckets:

- Lack of internal acquisitions and financial management capacity
- Poor acquisition and financial management leading to capacity deficits as legacy assets are set to be decommissioned
- Broader U.S. military procurement problems

Let’s consider each in turn.

Lack of internal acquisitions and financial management capacity

The Coast Guard’s lack of internal capacity to manage and execute its acquisitions program has come into sharp relief since 2002, when the Coast Guard began the largest acquisition program in the service’s history. The program, known as Deepwater, was created to build an interoperable system of five classes each of ships and aircraft as well as other so-called C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance) and unmanned aircraft capabilities meant to recapitalize the service’s aging operational fleet.

From the project's outset, the service realized that it did not have the resources to manage such a large, multibillion-dollar project in house. Specifically, the Coast Guard determined that it lacked "the experience and depth of workforce to manage the acquisition internally." So the service decided to outsource the entire project to a private-sector venture called Integrated Coast Guard Systems, which split the responsibilities 50-50 between Lockheed Martin and Northrop Grumman. ICGS became the systems integrator, meaning that it was not only in charge of the construction of the program's assets but also ran the oversight and day-to-day management of the contract. This created a situation in which the people who were supposed to be managing the contractors were in fact the contractors themselves—a situation similar to that faced by the Coast Guard's sister services in the Pentagon.⁵⁹

The Deepwater program experienced such severe construction and integration failures under ICGS, particularly on the part of Northrop Grumman, that the Coast Guard felt it necessary to take over the entire program in 2007. Under ICGS a number of platforms experienced severe problems, among them:

- Critical engineering failures on the Coast Guard's extended patrol boats caused the first eight boats under renovation to be rendered worthless and entirely decommissioned.
- Electronic communications systems failures allowed data transmissions to be leaked and potentially received by non-Coast Guard vessels, including those of other countries or nonstate actors.
- Material design flaws made the initial design of the Fast Response Cutter too heavy even to float, creating \$38 million in wasted developmental costs.⁶⁰

Then-Commandant Allen acknowledged in 2007 that the Coast Guard "had relied too heavily on contractors to do the work of the government and that government and industry had failed to control costs." After the Coast Guard took over as the lead systems integration, the Coast Guard established its own Acquisitions Directorate. Because the directorate was still in its infancy DHS and Integrated Coast Guard Systems took on the responsibility of reassessing the expected cost of the program and approved an acquisition baseline of \$24.2 billion for the program, an increase of nearly 45 percent above Deepwater's FY 2002 initial cost estimate of \$17 billion.

But as the Coast Guard began taking over projects and developing its own cost baselines, the service concluded that the \$24.2 billion baseline was far too low because some assets would probably cost more than originally anticipated. The service currently anticipates that the program will grow by another \$2.7 billion, but the GAO asserts that as USCG develops more independent baselines for additional assets, cost and schedule growth is likely to continue.⁶¹

The Coast Guard's difficulties assuming ICGS' responsibilities, however, are not limited to simply determining the cost and schedule of the various acquisition projects. Since assuming the wide-ranging responsibilities performed by ICGS, the service has experienced a number of other difficulties that encompass the entire program's construction, testing, and management, including managing requirements, determining how assets will be acquired, defining how assets will be employed by the service, and exercising technical authority over all asset design and configuration.⁶²

Perhaps the most critical deficiency—as the Coast Guard acknowledges—is that since the service “still faces challenges in hiring and retaining qualified acquisition personnel, this situation poses a risk to the successful execution of its acquisition programs.”⁶³ The Coast Guard maintains that its Acquisitions Directorate billet structure has increased to over 900, which is more than double what it was in 2007. As recently as last year, however, the Coast Guard's Acquisitions Directorate identified in its Human Capital Strategic Plan that it faces significant acquisitions challenges in regard to:

- Recruiting, developing, and retaining qualified personnel
- Developing human capital information management
- Developing human capital management policy guidance, procedures, and practices⁶⁴

DHS, in its oversight role over Coast Guard acquisitions, has taken steps to mitigate risks involved in the recapitalization program. GAO notes that “DHS issued a new interim management directive that, if implemented as intended, should help ensure that the department's largest acquisitions, including Deepwater, are more effectively overseen and managed.”⁶⁵

One significant step has been DHS's requirement that the Coast Guard implement the Major Systems Acquisitions Manual process, or MSAM. The MSAM process requires the service to first assess the need for an acquisition, then to select the supplier and to test and evaluate the initial models more rigorously before approv-

ing low-rate initial production and then moving into full-rate production. The Coast Guard is beginning to implement the manual, but the service, according to the GAO, “did not meet its goal of complete adherence to this process for all Deepwater assets by the end of March 2009,”⁶⁶ the latest figure and date that could be found for this report.

Consequently, the Coast Guard has had to make significant investment and acquisition decisions without first properly determining whether the products it is purchasing adhere to what it needs or are fully tested. For instance, 11 of the 36 Maritime Patrol Aircrafts (a transport and surveillance, fixed-wing aircraft that is a major part of Deepwater’s aircraft buy) that the Coast Guard eventually plans to acquire have already been delivered or are currently on contract. But the service made these decisions before it performed the testing that would demonstrate that what it was buying met Coast Guard needs.⁶⁷ According to GAO, “this situation puts the Coast Guard at risk for cost overruns and schedule slips if it turns out that what it is buying does not meet its requirements.”⁶⁸

The Coast Guard also made significant investments in the National Security Cutter before sufficient testing and evaluations could be made to determine that the cutter conformed to the service’s needs. Therefore, the service will have six of the eight planned National Security Cutters either built or under contract by the time that it is expected to have completed full operational testing—once again leaving the service vulnerable to costly modifications and retrofits should the individual cutters not meet their intended capability requirements.

Moreover, the Coast Guard initiated contracts for both the Fast Response Cutter and C4ISR capabilities based on the pressing need for both systems. Yet the service moved forward on contracts for both assets without having in place the acquisition documentation required by the MSAM process. Not only does the Coast Guard’s Fast Response Cutter contract leave the service vulnerable to additional costs and delays if the program does not meet requirements, but the accelerated schedule and plans to have at least 12 cutters “either delivered or under contract prior to the scheduled completion of operation testing” this fiscal year, “before it has certainty that what it is buying meets Coast Guard’s needs” adds another layer of risk, according to John P. Hutton, director of acquisitions and sourcing management at the GAO.⁶⁹

The upshot, according to GAO: “Acquisition decisions for certain assets are being made without having completed some key acquisition documentation in light of what the Coast Guard views as pressing operational needs.”⁷⁰

Poor acquisition and financial management leading to capacity deficits as legacy assets are set to be decommissioned

Acquisition difficulties not only impact the cost of assets but, critically, their scheduled delivery date, and thus the ability to replace legacy assets in order to maintain operational capacity. As noted in the fiscal constraints section, as the service begins decommissioning significant assets this year, delays in the scheduled delivery of new vessels and aircraft meant to replace aging assets are leading to increased maintenance costs for legacy assets, as well as operational capacity deficits.

Final asset delivery estimates for critical platforms such as the Medium Endurance Cutter, National Security Cutter, and Maritime Patrol Aircraft are 17 months, 24 months, and 57 months behind their 2007 baseline estimates, respectively. Meanwhile, delayed deployment of the service’s smaller projects such as small boat projects and UAV programs reduces the intended short-term capabilities of larger assets such as the NSCs.⁷¹

Broader U.S. military procurement problems

Defense acquisition programs are inherently complex endeavors that involve a multitude of actors to produce assets and manage their production and oversee their financing, among other key functions. Such an environment creates opportunities for fraud, waste, and abuse; inefficiencies and error abound as a result of these complexities.

Lack of internal capacity to manage acquisition projects in the Coast Guard is not merely a Coast Guard problem, but a problem shared by all the services themselves. As a House Armed Services Committee Report noted in 2007:

Simply put, the Department of Defense acquisition process is broken. The ability of the Department to conduct the large scale acquisitions required to ensure our future national security is a concern of the committee. The rising costs and lengthening

Acquisition decisions for certain assets are being made without having completed some key acquisition documentation in light of what the Coast Guard views as pressing operational needs.

*schedules of major defense acquisition programs lead to more expensive platforms fielded in fewer numbers. The committee's concerns extend to all three key components of the Acquisition process including requirements generation, acquisition and contracting, and financial management.*⁷²

The Bush administration oversaw a massive increase in the use of contractors throughout the asset procurement lifecycle. But this increase was not met with a concomitant rise in oversight of the programs that the contractors managed. Secretary of Defense Robert Gates acknowledged this trend in his speech at the Eisenhower Library in May of 2010, lamenting the fact that over the last decade, DOD “spending on contract services, excluding the Iraq and Afghanistan theaters, has grown by some \$23 billion. The one area of real decline in overhead was in the area where we actually needed it: full-time contracting professionals, whose numbers plunged from 26,000 to about 9,000.”

Much like the predicament the Coast Guard faced when Integrated Coast Guard Systems was in complete control of the Deepwater program, Gates noted that frequently the DOD has “ended up with contractors supervising other contractors—with predictable results.”⁷³

Nor are cost and schedule growth solely Coast Guard problems. GAO found in 2009 that cost estimates for 10 of the Pentagon’s 96 largest weapons programs have grown by 32 percent, rising to \$177 billion. Moreover, for 2008 programs, research and development costs are now 42 percent higher than originally estimated and the average delay in delivering initial capabilities has increased to 22 months.⁷⁴

The fact that these problems are pervasive throughout all services and the DOD notwithstanding, the Coast Guard can take certain steps to mitigate risks associated with its acquisition program and cost overruns by implementing its own internal measures to improve its acquisition and financial management capabilities.

Recommendations

Ensure Coast Guard leadership implements the Acquisition Directorate’s goals in its Human Capital Strategic Plan

The Coast Guard’s Acquisitions Directorate laid out eight acquisitions goals in 2009. These include:

- Executing all acquisitions within cost, schedule, and performance
- Providing transparency
- Encouraging unity of effort
- Achieving organizational synergy
- Providing alignment within the (prospective) deputy commandant for mission support organization
- Identifying, developing, documenting, and implementing best government and business policies
- Recruiting, building, and training a certified acquisitions workforce
- Establishing effective knowledge and information management processes⁷⁵

Congress and Coast Guard leadership must ensure that the Acquisition’s Directorate is given a sufficient and stable level of funding over a five-year term so that it can manage its programs and achieve these goals and hold it accountable for outcomes.

Develop clear progress and performance metrics for the Coast Guard’s recapitalization program

According to GAO, “One of the Coast Guard’s key challenges is the development of adequate measures to assess the progress and outcomes of the modernization program.” As the National Academy of Public Administration pointed out in its April 2009 report on the modernization program, such metrics are necessary to “ensure that the impacts of modernization are aligned with intended objectives; also, such measures provide an opportunity to “course-correct” as necessary.”⁷⁶

The establishment of appropriate metrics to inform decision making and ultimately create a clear rationale for the modernization program was a key recommendation of the 2009 NAPA Modernization study. The service should create these metrics as soon as possible and make them public to enable proper oversight and accountability.

Require the Coast Guard to provide more comprehensive budget reporting to Congress on all Coast Guard acquisition projects

While the Coast Guard budget reports include total acquisitions costs for their projects, they do not include information on contracts. The Navy, by contrast, includes all of the above information in all its budget reporting. The lack of these three items limits public and congressional understanding of the Coast Guard’s budget, leading to a lack of transparency. And it hinders the decision-making process, which increases the risk of cost and schedule overruns.

Congress must ensure that the Acquisition’s Directorate is given a sufficient and stable level of funding over a five-year term.

Institute a “fly before you buy” policy for Coast Guard procurement

As noted above, the Coast Guard continues to invest in and procure significant numbers of its recapitalization assets before it has conducted the testing that would demonstrate that what it is buying meets Coast Guard needs. The Coast Guard should follow former Deputy Secretary of Defense David Packard’s advice and implement a “fly before you buy” policy. In other words, the service should complete its testing and evaluations before full-scale production of its modernization assets is approved.

Ensure all Coast Guard programs comply with MSAM provided they are also in compliance with DHS acquisition directives

As noted above, compliance with the MSAM ensures that the Coast Guard is better able to determine whether the products it is purchasing adhere to what it needs or are fully tested. The Coast Guard should ensure that all of its acquisitions programs comply with the MSAM as soon as possible.

Coast Guard organizational restructuring

Another critical aspect of the Coast Guard's ongoing modernization effort is its program to transform its organizational structure. The Coast Guard maintains that reorganizing its command structure is necessary to promote effective allocation of resources and assets across the organization and to respond more adeptly to 21st century threats. In fact, Adm. Allen has argued repeatedly that the service will fail to sustain its operational effectiveness without a bold reorganization of the Coast Guard's support and logistics functions.⁷⁷

Currently, the Coast Guard is organized into two separate geographic regions with the Atlantic command, or LANTAREA, headquartered in Portsmouth, VA, and the Pacific command, or PACAREA, in Alameda, CA. The service has sought to unify these commands because the Coast Guard's bifurcated command structure creates redundancies, such as duplicate requests for forces and logistical support, which have in the past created inefficiencies during Coast Guard operations. Additionally, training methods for operations in the PACAREA can differ greatly for operations in the LANTAREA, opening the possibility for confusion due to this lack of standardization.

The proposed restructuring would bring the Coast Guard's force structure more closely in line with that of the Department of Defense. In its 2007 Cause for Action Brief, the Coast Guard noted that the "status-quo is a sub-optimal structure and we knew it when we created it in 1987—it is not that it is broken, it was never constructed correctly to begin with."⁷⁸

The National Academy of Public Administration, which endorses the Coast Guard's organizational restructuring effort, found that another key reason for restructuring the service's organization was the fact that each command was optimally interoperable only within its geographic area of responsibility,⁷⁹ meaning that components of each command were not adequately able to operate with those of the other command.

Moreover, GAO reports that the Coast Guard has noted “role ambiguity...due to the combination of both old and new organizational components operating concurrently.” One conspicuous example has been instances in the recent past where Coast Guard personnel who have been relocated to other command areas of responsibility remain focused on their previous command area.⁸⁰

While the Coast Guard’s operations in Haiti in early 2010 highlighted the consequences of the service’s aging fleet, previous operations in response to the attacks of September 11 and Hurricane Katrina in particular also revealed organizational challenges that make the case for command restructuring. According to GAO, Coast Guard operations during Hurricane Katrina in 2005 “highlighted the need for enhanced standardization across the service and more centralized logistics and asset management.”⁸¹ Overall, the Coast Guard performed admirably in its response to Hurricane Katrina; well over half of the 60,000 people left stranded by the hurricane were rescued by Coast Guard personnel.

But as NAPA notes in its Coast Guard Modernization Study, while the Coast Guard’s performance in response to Katrina was exceptional, “the lessons learned from these historic responses revealed gaps in the agency’s ability to surge a massive number of interoperable forces in place within hours; provide logistical support for sustained operations; and to quickly assemble adaptive force packages to meet the needs of missions requiring those types of forces.”⁸²

Most notably, the Coast Guard experienced logistical complications, such as difficulties securing fuel, alongside personnel security issues and communications challenges during its post-Katrina operations. The post-hurricane environment proved so disruptive that the service’s communications networks could not be relied upon. In some instances Coast Guardsmen and women distributed satellite phones and cell phones to mitigate communications infrastructure breakdowns. In other cases, they relied on text messages and personal email accounts when the Coast Guard’s data network was down.⁸³

In order to correct these inefficiencies, redundancies, and gaps in capability, the leadership of the Coast Guard has proposed establishing four new organizational entities:

- The Deputy Commandant for Mission Support, or DCMS
- The Deputy Commandant for Operations, or DCO
- Operations Command, or OPCOM
- Force Readiness Command, or FORCECOM

The first two entities, DCMS and DCO, are to be located in headquarters in Washington, D.C., whereas OPCOM and FORCECOM are field-based commands.

The Coast Guard maintains that these new appointments will centralize Coast Guard planning and will have the potential to alleviate many of the challenges observed in recent operations. The DCMS is designed to centralize management of critical resources (human resources, technology, and procurement) while the creation of a DCO would integrate policies, and policy interpretations, for all Coast Guard missions and operations while creating consistency across agencies. The two field commands, FORECOM and OPCOM, will provide a single force manager and provider for all Coast Guard forces and provide a common global operations and intelligence view, respectively.⁸⁴

The Coast Guard believes that this organizational restructuring will enable the service to better meet the challenges of the 21st century. In the coming decades, the Coast Guard will likely remain the nation's first responder to maritime environmental catastrophes, increased drug trafficking, illegal costal immigration, and disasters at sea as a result of increasing maritime trade as well as increased maritime and research activity in the Arctic region.

The Coast Guard will also remain an active member of the multinational Combined Task Force 151 conducting counterpiracy missions around the Gulf of Aden.⁸⁵ The service believes that “by eliminating existing geographical command barriers and establishing a more centralized and functionally based organizational structure”, the Coast Guard will be better able to meet these challenges.⁸⁶

Despite a concerted effort by the Coast Guard's leadership to implement these structural changes, creating new high-level positions requires statutory changes that must be approved by Congress. A bill, the Coast Guard Modernization Act of 2009, H.R. 2650, was considered by the House Subcommittee on Coast Guard and Maritime Transportation and Infrastructure and was then recommended for a floor vote. The Senate bill, the Vessel Conveyance Act, S. 1194, has been passed by its respective committee in that chamber but no final action has been taken as of the time of publication, leaving the Coast Guard with a command structure that is geographically divided and functionally challenged.

Recommendations

The Coast Guard must articulate a persuasive rationale for organizational restructuring

The Coast Guard has provided numerous justifications for its modernization plans, including former Commandant Allen's Coast Guard Modernization presentation. Yet (as evidenced by the lack of movement on legislation in Congress), the service has not effectively communicated why the transformation is necessary to relevant decision makers in Congress, DHS, and the Obama administration.

In order to get these stakeholders to buy into the organizational change, NAPA argues that the Coast Guard must communicate how the proposed restructuring will make the Coast Guard more effective.⁸⁷ The Coast Guard's new commandant, Adm. Robert Papp, should make the service's case for modernization a common theme in his testimonies and speeches before Congress and DHS leadership.

Move forward with necessary congressional approval for the Coast Guard's command restructuring

The Obama administration should work with Congress to ensure that the necessary amendments to Title 14 of the U.S. Code, changing the vice commandant's grade from that of a vice admiral to an admiral, and enabling the Coast Guard to appoint four vice admirals rather than two,⁸⁸ are passed. The service has worked hard to accomplish the interim actions for the reorganization program on time. These amendments would grant the service the statutory authority necessary to implement the final stages of its command restructuring.

Develop metrics to ensure that the command restructuring has its intended effect

Given the challenges and difficulties caused by the Coast Guard's current organizational structure, its command reorganization is justified and should be implemented. But adding layers of bureaucracy in an effort to improve effectiveness carries with it its own risks for inefficiency and redundancy. The Coast Guard, in collaboration with the Strategic Transformation Team that was stood up by former Commandant Adm. Allen to help plan and synchronize the service's modern-

ization effort, should establish performance and efficiency metrics to ensure that its command restructuring has its proper effect. Coast Guard leadership should be prepared with contingency plans should the restructuring prove ineffective.

Consider placing the Coast Guard within the Pentagon instead of within DHS

If DHS is not able to provide sufficient resources, Congress should consider placing the Coast Guard within the Pentagon under the Department of the Navy. Of the five branches of the armed forces, the Coast Guard is the only service that is not controlled by the Pentagon. Because of its domestic and international multimission set, over the course of its history, the Coast Guard has fallen under the authority of agencies that are only tangentially related to certain aspects of its missions, such as the Treasury Department, Department of Transportation, and currently DHS.

The Obama administration should consider placing the Coast Guard within the Department of Defense in the Department of the Navy as a separate service to see if this shift could enable the Coast Guard to overcome some of its key challenges. For instance, the Coast Guard currently lacks the internal capacity to manage its acquisitions and finances effectively, tasks on which the Department of the Navy, given appropriate funding and leadership, could provide critical oversight and advice on. Such a move could also facilitate the improvement of the Coast Guard's lagging defense readiness.

Because the Coast Guard may come under control of the Department of the Navy during times of war to provide logistical and war fighting capabilities to the Pentagon, the Defense Department should have policies and procedures already in place that could ensure a smooth transition for the department.

Preparing for climate change's challenges

The Coast Guard's ongoing effort to meet an expanded mission set within a constrained fiscal environment is likely to grow even more challenging in the future. Not only will the USCG face increased maritime traffic—in particular the growth in tankers carrying LNG and other hazardous cargos—and ongoing homeland security threats, but the accumulating effects of global climate change will increasingly push the Coast Guard further into the Arctic, a previously unknown area of operations, and may increase the need for Coast Guard services in response to natural disasters such as hurricanes and rising sea levels intensified by climate change.⁸⁹

Political posturing and outdated deliberations over the science of climate change will not help the Coast Guard prepare for this emerging challenge. The time for debate is long past. As the U.S. Global Change Research Program noted in its 2009 report on climate change and the United States, “Observations show that warming of the climate is unequivocal. The global warming observed over the past 50 years is due primarily to human-induced emissions of heat-trapping gases.”⁹⁰

Among all of the emerging threats facing U.S. national security policymakers in the 21st century, climate change undoubtedly has the greatest potential to further strain the Coast Guard's already stretched resources and capabilities. The service cannot confront it with the same “do more with less” disposition with regard to levels of spending, infrastructure, and personnel that has hindered its operations since 2001.

The Arctic

According to the U.N. Intergovernmental Panel on Climate Change, “average arctic temperatures have increased at almost twice the global average rate in the past 100 years,” and “in some projections, Arctic late-summer sea ice disappears almost entirely by the latter part of the 21st century.”⁹¹ Former Coast Guard Commandant Adm. Allen bluntly acknowledged that this warming will have an

effect on USCG operations in a press conference in March 2010: “I’m not a scientist, so I’m agnostic on the science. But I do know that there’s water where there didn’t used to be, and I’m responsible for it.”⁹²

As the Arctic becomes more accessible to seaborne trade, scientific exploration, tourism, and other maritime activities, the Coast Guard will face greater demand for its services there. In 2007, the National Research Council identified a number of areas where Arctic and Antarctic USCG operations may increase in response to the changing climate. These include increased search and rescue, vessel monitoring and domain awareness, icebreaking, and protecting natural resources.⁹³

This expanded operation set will be constrained by a dangerous and unfamiliar operating environment. The USCG’s FY 2008 “U.S. Coast Guard Polar Operations” report notes that greater mobility and increased operations in the Arctic will bring unexpected safety risks. “While there may be more ‘ice free’ days in the Arctic, this does not equate to an inherently safe environment,” says the report. “The combination of large ice floes and higher waves presents an extremely hazardous operating environment for vessels.”⁹⁴

Moreover, USCG maritime safety, environmental, and other operations in the Arctic will be made more challenging by the need for specialized ice breakers, as well as by the lack of permanent USCG facilities above the Arctic Circle. The report noted that the Arctic environment can be particularly challenging for Coast Guard operations because “given transit times, cutters (other than polar icebreakers) and aircraft are only able to operate for a few days or a few hours on scene before they have to return for fuel” to far away facilities.⁹⁵

The warming of the Arctic also may put increased pressure on the USCG’s already relatively new and demanding homeland security responsibilities. The United States is one of eight countries with territory bordering the Arctic region (Canada, Denmark, Finland, Iceland, Norway, Russia, and Sweden make up the rest of the octet), but is the only one of the group who has not ratified the U.N. Convention on the Law of the Sea. As other nations begin to assert their rights in the Arctic region, having a common legal basis for understanding territorial and resource rights will become vital.

This will be all the more important as the Arctic environment draws more political and military interest. In 2007, a Russian expedition planted a titanium national flag on the seabed under the North Pole, and Russian leaders have been outspoken

“I’m not a scientist,
so I’m agnostic
on the science.
But I do know
that there’s water
where there didn’t
used to be, and I’m
responsible for it.”

—Former USCG
Commandant Thad Allen

about their desire to pursue national interests in the Arctic region.⁹⁶ Even China, which does not border the Arctic, is reportedly seeking a larger role in the region and is building its first polar icebreaker.⁹⁷

Arguably the most important assets in the Coast Guard's inventory to deal with this new operating environment are three vessels: the heavy icebreakers Polar Sea and Polar Star, and a newer, lighter icebreaker, the Healy. These ships are the USCG's primary assets for homeland security, search-and-rescue, and environmental missions in the Arctic. The three ships are also frequently made available to other federal agencies, such as the National Oceanic and Atmospheric Administration and the National Science Foundation, both of which conduct research in the Arctic and Antarctic regions.⁹⁸

The Polar Star has been out of commission in "caretaker status" since 2006, but Adm. Allen announced earlier this year that the Coast Guard was reactivating the vessel and expected it to return to service by 2013. The ship will have an estimated seven to eight years of service life after that date.⁹⁹ The Healy is relatively new and has approximately 17 more years of service life, while the Polar Sea "recently completed a service life extension program that extended its service life to approximately 2014."¹⁰⁰

As evidenced by the Coast Guard's decision to reactivate the Polar Star, demand for these vessels is on the rise. Unfortunately, the Coast Guard's access to the ships is hampered by a unique arrangement with the National Science Foundation, which since FY 2006 has paid for the operation of the ships in return for their use for scientific projects. Adm. Allen has been outspoken in his desire to revisit this arrangement. As he noted in 2008, "this whole thing cries for a policy discussion, a way forward to rationalize how the funding is being done because right now if it's not science, we cannot deploy an icebreaker up in to the Arctic for extended presence there."¹⁰¹ The National Science Foundation's FY 2011 budget request contains \$54 million for operations and maintenance for the Polar Sea and Healy,¹⁰² while the USCG's FY 2011 request estimates that \$60.4 million will be reimbursed from the NSF servicewide in 2011.¹⁰³

This arrangement not only limits our nation's ability to project power in the Arctic, but may also gradually erode the skills of USCG personnel to operate in those environments.¹⁰⁴ In 2007, the National Research Council of the National Academies completed a study on U.S. polar icebreaking capabilities, finding that the Coast Guard had no funding for patrol missions along the Alaskan coast and that "the U.S. Coast Guard polar icebreakers remain at the pier unless other agen-

cies ‘purchase’ operational icebreaker days.”¹⁰⁵ The study noted that the United States was “so late in recognizing the age and condition of the polar icebreaker fleet that we must act with speed and determination,” and assumed that two new polar ships would be ready for service by 2015.¹⁰⁶

Unfortunately, beyond the recommissioning of the aging Polar Star, the USCG has not been able to move forward with plans to add additional polar ships to its fleet, although it has reportedly been studying the issue since 2008.¹⁰⁷

Disaster response

Changing conditions in the Arctic will challenge the USCG with a new operating environment, but climate change may also alter conditions in the Coast Guard’s traditional area of operations. While the precise future effects of climate change are necessarily somewhat speculative, the broad trends are clear. According to the U.S. Global Change Research Program, “as ocean temperatures continue to increase in the future, it is likely that hurricane rainfall and wind speeds will increase in response to human-caused warming—even without further coastal development, storm surge levels and hurricane damages are likely increase because of increasing hurricane intensity coupled with sea-level rise.”¹⁰⁸

In August 2005, Hurricane Katrina made landfall on the U.S. coast off the Gulf of Mexico. According to analysts at the National Hurricane Center, Katrina “was the costliest and one of the five deadliest hurricanes ever to strike the United States.” The storm flooded 80 percent of the city of New Orleans and directly caused approximately 1,500 fatalities across four states.¹⁰⁹ The USCG played a significant role in the U.S. response to the storm. As noted in the organizational restructuring section, the Coast Guard rescued 24,135 people and performed 9,409 medical evacuations. The service notes that “the rescue and response efforts were some of the largest in Coast Guard history, involving units from every district as well as a total of 5,600 Coast Guardsmen.”¹¹⁰

While hurricanes on the scale of Katrina have been rare in the United States, USCG will continue to serve as a first responder to severe coastal disasters. Indeed, for Hurricane Katrina, then-Coast Guard Commandant Thad Allen was



A resident is rescued by the U.S. Coast Guard from a home surrounded by floodwaters from Hurricane Katrina Tuesday, Aug. 30, 2005 in New Orleans.

Source: AP Photo/David J. Phillip

given responsibility for the entire federal response after FEMA Director Michael Brown had to be relieved of that duty. If, as is likely, climate change does lead to more severe hurricanes and coastal flooding in the United States, then the Coast Guard will need the resources to retain a robust search-and-rescue capability in shallow water and other riverine environments. This will require both aircraft (helicopter) and surface (small boat) assets.

In the wake of the Katrina response, former Coast Guard Cmdr. Stephen Flynn noted that “the Coast Guard is a damn good building block, but you can’t expect it to do what it did in Katrina on the current budget model it’s on.”¹¹¹ The Coast Guard’s response to the recent earthquake in Haiti, in which a number of assets required repairs, demonstrates how correct Flynn was. If more extreme weather prompted by climate change comes to pass, it will make asset recapitalization all the more necessary.

Recommendations

Buy two new polar icebreakers over the next 10 years and invest in a service life extension for the Polar Sea

The potential for expanded U.S. operations and responsibilities in the Arctic region necessitates an investment in future USCG arctic capabilities. While the Coast Guard is actively studying the need for future vessels, continued delay does not serve U.S. interests in the arctic region. Congress, the Obama administration, and DHS should work together now to initiate a new polar icebreaker program in the FY 2012 budget, which takes into account the lessons learned from the service’s Deepwater program.

According to the Congressional Research Service, it will take 8 to 10 years from the time the initial decision to purchase an icebreaker is made for a new vessel to enter into service.¹¹² If the icebreaker programs were able to proceed without significant schedule delays, then the new vessels would come online just as the Polar Star reached the end of its service life. The Polar Sea would require another service life extension to continue working until its replacement arrives.

Funding for the new polar icebreaker and the service life extension should be placed in the Coast Guard’s budget. The Congressional Research Service notes that the National Science Foundation might be able to fund part of the purchase

of new polar icebreakers, or that the ships could be purchased through DOD (the procedure used to procure the Healy). But the NSF option in particular would further erode the USCG's control over its own assets and should be avoided. According to Coast Guard estimates, the new icebreakers would cost between \$800 million to \$925 million per ship, a necessary cost that would undoubtedly entail increasing the USCG's budget over the next decade.¹¹³ This additional cost should not be used to justify reducing funding for other Coast Guard accounts.

Ensure Coast Guard budgetary control over the refurbished Polar Star in the short term

Given future projections for Arctic warming and expanded U.S. and international activities in the region, the current budget arrangement with the National Science Foundation is unsustainable in the long term. Yet increased U.S. responsibilities in the Arctic should not come at the cost of degrading our arctic research capabilities.

The National Science Foundation has been able to conduct its research without use of the Polar Star since it was put into caretaker status in 2006. Therefore it makes sense that the refurbished Polar Star could be devoted entirely to USCG missions when it returns to service in 2013, and be funded through DHS. This option would increase the ability of our Coast Guardsmen and women to gain vital experience operating in the arctic environment.

Congress should ratify the U.N. Convention on the Law of the Sea

There are benefits in this treaty for just about everyone, including environmentalists, business associations, oil, shipping, and fishing companies, and the Navy and Coast Guard—all of whom support ratification. Moreover, both Democratic and Republican lawmakers are largely in favor despite the fact that the treaty has languished in the Senate since the mid-1990s.

Not only will the treaty have meaningful applications in the open seas, but the Coast Guard sees the treaty as a critical tool to enhance port security. Today, the need for binding rules of the road regarding the world's oceans is clear and the administration and Congress should act accordingly.

Conclusion

The Coast Guard is, always has been, and always will be one of America's great bargains. While its budget pales in comparison with that of the other military services, the functions it performs for the country rival those of the other military services. But unlike the other services, for too long it has been content to embrace its unofficial motto of doing more and more with less and less. This must change.

It is time for the Coast Guard and the nation to fully embrace its official motto, *semper paratus*—always ready. If the Coast Guard is to be prepared for the increasing security responsibilities that have been and will continue to be thrust upon it in light of the September 11 terrorist attacks while dealing with the problems caused by climate change, then its baseline budget should increase immediately by \$5 billion to about \$15 billion a year and it should remain at that level in real terms for at least five more years so that the Coast Guard can manage its acquisition programs rationally. This level of funding would still be far less than that allocated to spare many individual programs in the Department of Defense, let alone any of the nation's four other armed services. In addition, it must make the organizational and administrative changes discussed in the previous sections.

If it does not receive the additional funds and make these changes, the consequences for the nation could be severe. To take just one example: If a violent extremist is able to smuggle a nuclear weapon into this country in a shipping container because the Coast Guard did not have the manpower or equipment to stop it, the results could be catastrophic. The responsibility falls on the administration and Congress to ensure that the Coast Guard can make the organizational changes and acquire the resources necessary to be always ready.

It is time for the Coast Guard and the nation to fully embrace its official motto, *semper paratus*—always ready.

Endnotes

- 1 Charles W. Bowen, Testimony before the House Subcommittee on Coast Guard and Maritime Transportation, February 25, 2010, available at <http://transportation.house.gov/Media/file/Coast%20Guard/20100225/MCPOCG%20Testimony.pdf>.
- 2 Government Accountability Office, "Coast Guard: Observations on the Fiscal Year 2011 Budget, Past Performance, and Current Challenges" (2010), available at <http://www.gao.gov/new.items/d104111.pdf>.
- 3 Ibid.
- 4 Bowen, Testimony before the House Subcommittee on Coast Guard and Maritime Transportation.
- 5 Ibid.
- 6 Ibid.
- 7 Chris Stroh, "Senators See Gaps in Coast Guard's Budget Plan," *Government Executive*, April 14, 2010, available at <http://www.govexec.com/dailyfed/0410/041410cdam2.htm>.
- 8 U.S. House of Representatives Committee on Transportation and Infrastructure, "Hearing on the 'FY2011 Budget for the Coast Guard, the Maritime Administration, and the Federal Maritime Commission,'" February 24, 2010, available at http://transportation.house.gov/Media/file/Coast%20Guard/20100225/SSM_CG.pdf. Information also provided by U.S. Coast Guard June 3, 2010.
- 9 Adm. Thad Allen, Testimony before the Senate Appropriations Committee on the Coast Guard Fiscal Year 2011 Budget Request, Department of Homeland Security, April 13, 2010, available at http://www.dhs.gov/ynews/testimony/testimony_1271366302572.shtm.
- 10 Coast Guard Acquisitions Directorate, "National Security Cutter Project Description," U.S. Coast Guard, available at <http://www.uscg.mil/acquisition/nsc/projectdescription.asp> (last accessed May 20, 2010).
- 11 U.S. House of Representatives Committee on Transportation and Infrastructure, "Hearing on the 'FY2011 Budget for the Coast Guard, the Maritime Administration, and the Federal Maritime Commission.'"
- 12 Government Accountability Office, "Coast Guard: As Deepwater Systems Integrator, Coast Guard is Reassessing Costs and Capabilities but Lags in Applying its Disciplined Acquisitions Approach" (2009), available at <http://www.gao.gov/new.items/d09682.pdf>.
- 13 Ibid.
- 14 Bettina H. Chavanne, "RFP Imminent for U.S. Coast Guard Aircraft," *Aviation Week*, April 2, 2010, available at http://www.aviationweek.com/aw/generic/story_generic.jsp?channel=defense&id=news/asd/2010/04/02/01.xml&headline=RFP%20Imminent%20For%20U.S.%20Coast%20Guard%20Aircraft.
- 15 GAO, "Coast Guard: Observations on the Fiscal Year 2011 Budget, Past Performance, and Current Challenges."
- 16 Government Accountability Office.
- 17 Rep. Elijah Cummings, Statement before the House Subcommittee on the Coast Guard and Maritime Transportation, February 25, 2010, available at <http://transportation.house.gov/News/PRArticle.aspx?NewsID=1115>.
- 18 Rep. Elijah Cummings, Statement before the House Subcommittee on the Coast Guard and Maritime Transportation, February 25, 2010.
- 19 U.S. House of Representatives Committee on Transportation and Infrastructure, "Hearing on the 'FY2011 Budget for the Coast Guard, the Maritime Administration, and the Federal Maritime Commission.'"
- 20 Stephen Abott, Comment on "Secretary Gates to Increase Army Manpower," The Stimson Center Budget Insight Blog, comment posted July 21, 2009, available at <http://budgetinsight.wordpress.com/2009/07/21/secretary-gates-to-increase-army-manpower/> (accessed June 1, 2010).
- 21 Personnel levels from 2004 to 2010 are available at Department of Homeland Security, "Budget and Finance Documents," available at <http://www.dhs.gov/xabout/budget/> (accessed June 1, 2010). Information from 2001 available at JayEtta Z. Hecker, "Coast Guard Budget and Management Challenges for 2003 and Beyond" (General Accounting Office, 2002), available at <http://www.gao.gov/new.items/d02538t.pdf>. Information for 2003 is available at: Margaret T. Wrightson, "Coast Guard Key Management and Budget Challenges for Fiscal Year 2005 and Beyond" (General Accounting Office, 2004), available at <http://www.gao.gov/new.items/d04636t.pdf>.
- 22 BNET, "Rep. David E. Price Holds a Hearing on the Fiscal Year 2009 Budget for the Coast Guard," March 7, 2008, available at http://findarticles.com/p/news-articles/political-transcript-wire/mi_8167/is_20080307/rep-david-price-holds-hearing/ai_n50719176/pg_4/?tag=content;col1, p.4.
- 23 Letter from the House Subcommittee on Coast Guard and Maritime Transportation Staff to members of the Subcommittee on Coast Guard and Maritime Transportation, February 24, 2010, available at http://transportation.house.gov/Media/file/Coast%20Guard/20100225/SSM_CG.pdf, p.2.
- 24 BNET, "Rep. David E. Price Holds a Hearing on the Fiscal Year 2009 Budget for the Coast Guard," p. 22.
- 25 Renae Merle and Spencer S. Hsu, "Costly Fleet Update Falts, Contractors Oversee Coast Guard Project," *The Washington Post*, December 8, 2006, available at <http://www.washingtonpost.com/wp-dyn/content/article/2006/12/07/AR2006120702037.html>; Department of Homeland Security Office of Inspector General, "Improvements Needed in the U.S. Coast Guard's Acquisition and Implementation of Deepwater Information Technology Systems," August 2006, available at http://www.dhs.gov/xoig/assets/mgmt/rpts/OIG_06-55_Aug06.pdf, p.8.
- 26 Associated Press, "GAO: Coast Guard stretched too thin," January 9, 2008, available at <http://www.msnbc.msn.com/id/22580256/>; For more information see: Government Accountability Office, "Federal Efforts Needed to Address Challenges in Preventing and Responding to Terrorist Attacks on Energy Commodity Tankers" (2007), available at <http://www.gao.gov/new.items/d08141.pdf>.
- 27 Eben Kaplan, "Liquefied Natural Gas: A Potential Terrorist Target?" Council on Foreign Relations, February 27, 2006, available at <http://www.cfr.org/publication/9810/>.
- 28 Richard A. Clarke, "LNG Facilities in Urban Areas" (Good Harbor Consulting, LLC, 2005), available at <http://www.projo.com/extra/2005/Ing/clarkereport.pdf>, p.7.

- 29 Government Accountability Office, "Federal Efforts Needed to Address Challenges in Preventing and Responding to Terrorist Attacks on Energy Commodity Tankers" (2007), available at <http://www.gao.gov/new.items/d08141.pdf>, p. 52.
- 30 Federal Energy Regulatory Commission, "North American LNG Terminals – Existing" (As of April 12, 2010), available at <http://www.ferc.gov/industries/lng/indus-act/terminals/lng-existing.pdf>.
- 31 Federal Energy Regulatory Commission, "North American LNG Terminals – Approved" (As of April 12, 2010), available at <http://www.ferc.gov/industries/lng/indus-act/terminals/lng-approved.pdf>.
- 32 Federal Energy Regulatory Commission, "North American LNG Import Terminals – Proposed" (As of April 12, 2010), available at <http://www.ferc.gov/industries/lng/indus-act/terminals/lng-proposed.pdf>.
- 33 Government Accountability Office, "Coast Guard Inspections Identify and Correct Facility Deficiencies, but More Analysis Needed of Program's Staffing, Practices, and Data" (2008), available at <http://www.gao.gov/new.items/d0812.pdf>.
- 34 "Cosco Busan and Marine Casualty Investigation Program," Hearing before the House Subcommittee on Coast Guard and Maritime Transportation, April 10, 2008, available at http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110_house_hearings&docid=f:41945.pdf, p. 15.
- 35 Letter from House Subcommittee on Coast Guard and Maritime Transportation Staff to members of the Subcommittee on Coast Guard and Maritime Transportation, September 29, 2009, available at <http://www.scribd.com/doc/20435109/Background-on-House-Transportation-and-Infrastructure-Subcommittee-on-Coast-Guard-search-and-rescue>.
- 36 U.S. Coast Guard, "Incident Specific Preparedness Review M/V Cosco Busan Oil Spill in San Francisco Bay," January 11, 2008, available at http://cdn.sfgate.com/chronicle/acrobat/2008/01/29/ba_coscobusanisrphi.pdf, p. 8.
- 37 Government Accountability Office, "Coast Guard: Service Has Taken Steps to Address Historic Personnel Problems, but It Is too Soon to Assess the Impact of These Efforts," (2010), available at <http://www.gao.gov/new.items/d10268r.pdf>, p. 5.
- 38 Ibid, p. 11 – 12.
- 39 Ibid, p. 18.
- 40 Letter from the House Subcommittee on Coast Guard and Maritime Transportation Staff to members of the Subcommittee on Coast Guard and Maritime Transportation, , p. 2.
- 41 "Area Commanders," US Code Title 14, Part I, Chapter 3, § 50, available at http://www.law.cornell.edu/uscode/html/uscode14/uscode14_00000050---000-.html.
- 42 "Secretary of the Army," US Code Title 10, Subtitle B, Part I, Chapter 303, § 3013, available at http://www.law.cornell.edu/uscode/10/uscode10_00003013---000-.html.
- 43 U.S. Coast Guard, "Missions," available at <http://www.uscg.mil/top/missions/Defense.asp>.
- 44 U.S. Coast Guard, "Operation Iraqi Freedom," available at http://www.uscg.mil/history/articles/OIF_Units_Deployed.asp; Basil Tripas, Patrick Roth, and Renee Fye, "Coast Guard Operations During Operation Iraqi Freedom," CAN, October 2004, available at http://www.uscg.mil/history/articles/OIF_D0010862.pdf, p. 35.
- 45 Global Security, "Major Theater War Readiness," available at <http://www.globalsecurity.org/military/ops/mtw-readiness.htm>; Expect-More.gov, "Coast Guard Defense Readiness," available at <http://www.whitehouse.gov/omb/expectmore/detail/10003636.2006.html>.
- 46 Department of Homeland Security Office of Inspector General, "Annual Review of the United States Coast Guard's Mission Performance (FY2008)" (2009), available at http://www.dhs.gov/xoig/assets/mgmt-rpts/OIG_10-17_Nov09.pdf, p. 32.
- 47 Ibid, p. 31.
- 48 Ibid, p. 32.
- 49 ExpectMore.gov, "Coast Guard Defense Readiness."
- 50 Stephen L. Caldwell, "Observations on the Requested Fiscal Year 2011 Budget, Past Performance, and Current Challenges" (Government Accountability Office, 2010), available at <http://www.gao.gov/new.items/d10411t.pdf>, p. 3.
- 51 ExpectMore.gov, "Coast Guard Defense Readiness."
- 52 Amy Belasco, "The Cost of Iraq, Afghanistan, and Other Global War on Terror Operations Since 9/11" (Congressional Research Service, 2009), available at <http://www.fas.org/sgp/crs/natsec/RL33110.pdf>, p. 32.
- 53 Department of Homeland Security Office of Inspector General, "Annual Review of the United States Coast Guard's Mission Performance (FY2008)," p. 5.
- 54 Caldwell, "Observations on the Requested Fiscal Year 2011 Budget, Past Performance, and Current Challenges," p. 32.
- 55 Memorandum from Sally Brice-O'Hara, RADM to Distribution, April 30, 2009, available at http://www.uscg.mil/hq/cg5/cg513/docs/CGRR_DCO_memo_signed.PDF.
- 56 Department of Homeland Security Office of Inspector General, "Annual Review of the United States Coast Guard's Mission Performance (FY2008)," p. 33.
- 57 Statement of Stephen L. Caldwell, "Coast Guard: Observations on the Genesis and Progress of the Service's Modernization Program" (Government Accountability Office, 2009), available at <http://www.gao.gov/new.items/d09530r.pdf>.
- 58 Testimony of Admiral Thad Allen Before the Senate Appropriations Committee on the Coast Guard Fiscal Year 2011 Budget Request, Department of Homeland Security, April 13, 2010
- 59 James M. Klatell, "The Troubled Waters of 'Deepwater,'" 60 Minutes, August 14, 2007, available at <http://www.cbsnews.com/stories/2007/05/17/60minutes/main2823448.shtml>.
- 60 Ibid.
- 61 GAO, "Coast Guard: As Deepwater Systems Integrator, Coast Guard is Reassessing Costs and Capabilities but Lags in Applying its Disciplined Acquisitions Approach."
- 62 Ibid.
- 63 Ibid.
- 64 U.S. Coast Guard Acquisitions Directorate, Acquisitions Human Capital Strategic Plan Version 2.0, 2009, available at http://www.uscg.mil/ACQUISITION/aboutus/2009_USCG_HCSP_V2.0.pdf.
- 65 GAO, "Coast Guard: As Deepwater Systems Integrator, Coast Guard is Reassessing Costs and Capabilities but Lags in Applying its Disciplined Acquisitions Approach."
- 66 Ibid.
- 67 Ibid.
- 68 Ibid.
- 69 Ibid.
- 70 GAO, "Coast Guard: As Deepwater Systems Integrator, Coast Guard is Reassessing Costs and Capabilities but Lags in Applying its Disciplined Acquisitions Approach."
- 71 Ibid.
- 72 Report of the Committee on Armed Services, House of Representatives on H.R. 5122, Report 109-452, May 5, 2006, p. 350.
- 73 Secretary of Defense Robert Gates, Remarks at the Eisenhower Library, May 8, 2010, available at <http://www.defense.gov/speeches/speech.aspx?speechid=1467>.
- 74 Government Accountability Office, "Defense Acquisitions: Assessment of Selected Weapons Programs" (2009), available at <http://www.gao.gov/new.items/d09326sp.pdf>.

Note: GAO updated this 2009 report in 2010 but its results were inconclusive.

- 75 U.S. Coast Guard Acquisitions Directorate, Acquisitions Human Capital Strategic Plan Version 2.0, 2009.
- 76 National Academy of Public Administration, "U.S. Coast Guard Modernization Study" (2009).
- 77 Ibid., p. 12.
- 78 U.S. Coast Guard, "U.S. Coast Guard Modernization, Cause for Action Brief," December 19, 2007.
- 79 National Academy of Public Administration, "U.S. Coast Guard Modernization Study" p. 8.
- 80 GAO, "Coast Guard: Observations on the Fiscal Year 2011 Budget, Past Performance, and Current Challenges," p. 18.
- 81 Caldwell, "Coast Guard: Observations on the Genesis and Progress of the Service's Modernization Program."
- 82 National Academy of Public Administration, "U.S. Coast Guard Modernization Study," p. 8.
- 83 Government Accountability Office, "Coast Guard: Observations on the Preparation, Response, and Recovery Missions Related to Hurricane Katrina" (2006), available at <http://www.gao.gov/new.items/d06903.pdf>.
- 84 National Academy of Public Administration, "U.S. Coast Guard Modernization Study," p. 17.
- 85 U.S. Coast Guard, "Coast Guard Combats Piracy," *Coast Guard Journal*, February 20, 2009, available at <http://www.uscg.mil/cgjournal/message.asp?id=119>.
- 86 Caldwell, "Coast Guard: Observations on the Genesis and Progress of the Service's Modernization Program."
- 87 National Academy of Public Administration, "U.S. Coast Guard Modernization Study," p. 12.
- 88 GAO, "Coast Guard: Observations on the Fiscal Year 2011 Budget, Past Performance, and Current Challenges."
- 89 Caldwell, "Coast Guard: Observations on the Genesis and Progress of the Service's Modernization Program," p. 8.
- 90 U.S. Global Change Research Program, "Global Climate Change Impacts in the United States" (2009), available at <http://downloads.globalchange.gov/usimpacts/pdfs/climate-impacts-report.pdf>, p. 9.
- 91 U.N. Intergovernmental Panel on Climate Change, "Climate Change 2007: Synthesis Report" (2007), available at http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr.pdf, p. 30, 46.
- 92 Tim Flanagan, "Admiral Allen visits Seattle to reactivate USCGC Polar Star," March 10, 2010, available at <http://www.pugetsoundmaritime.com/2010/03/adm.-allen-visits-seattle-to-reactivate-uscg-polar-star/>.
- 93 Committee on the Assessment of U.S. Coast Guard Polar Icebreaker Roles and Future Needs, "Polar Icebreakers in a Changing World: An Assessment of U.S. Needs" (National Research Council, 2007), p.47-51.
- 94 U.S. Coast Guard, "Report to Congress: U.S. Coast Guard Polar Operations," available at http://www.uscg.mil/hq/cg5/cg513/docs/FY08_OMNIBUS_Polar_Ops_Report.pdf, p. 3.
- 95 Ibid., p. 11.
- 96 BBC News, "Russia plants flag under N Pole," August 2007, available at <http://news.bbc.co.uk/2/hi/europe/6927395.stm>.
- 97 Bill Schiller, "China warming up to be an Arctic player," *The Toronto Star*, March 1, 2010, available at <http://www.thestar.com/news/world/china/article/773148--china-warming-up-to-be-an-arctic-player>; Walter Rogers, "War over the Arctic? Global Warming skeptics distract us from security risks," *The Christian Science Monitor*, March 2, 2010, available at <http://www.csmonitor.com/Commentary/Walter-Rodgers/2010/0302/War-over-the-Arctic-Global-warming-skeptics-distract-us-from-security-risks>.
- 98 Chris Strohm, "Coast Guard commandant cites urgent need for icebreakers," *Government Executive*, February 12, 2010, available at <http://www.govexec.com/dailyfed/0210/021210cdpm1.htm>.
- 99 George Tibbits, "Coast Guard: Icebreaker to be reactivated by 2013," Associated Press, March 11, 2010, available at <http://www.stripes.com/article.asp?section=104&article=68628>.
- 100 USCG, "Report to Congress: U.S. Coast Guard Polar Operations," p. 13.
- 101 Dan Dupont, comment on "Coast Guard, Eyeing Melting Ice Caps, Wants 'Polar Strategy,'" Danger Room Blog, comment posted on April 14, 2008, available at <http://www.wired.com/dangerroom/2008/04/coast-guard-eye/> (accessed June 1, 2010).
- 102 National Science Foundation FY2011 Budget, "Office of Polar Programs," available at http://www.nsf.gov/about/budget/fy2011/pdf/13-OPP_fy2011.pdf.
- 103 Department of Homeland Security, "Congressional Budget Justification FY2011," available at http://www.dhs.gov/xlibrary/assets/dhs_congressional_budget_justification_fy2011.pdf, p. 1806.
- 104 USCG, "Report to Congress: U.S. Coast Guard Polar Operations," p. 15.
- 105 Committee on the Assessment of U.S. Coast Guard Polar Icebreaker Roles and Future Needs, "Polar Icebreakers in a Changing World: An Assessment of U.S. Needs," p. 81.
- 106 Ibid., p. 87.
- 107 Ronald O'Rourke, "Coast Guard Polar Icebreaker Modernization: Background, Issues, and Options for Congress" (Congressional Research Service, 2010), available at <http://www.fas.org/sgp/crs/weapons/RL34391.pdf>, p. 2.
- 108 U.S. Global Change Research Program, "Global Climate Change Impacts in the United States," p. 36.
- 109 Richard D. Knabb, Jamie R. Rhome, and Daniel P. Brown, "Tropical Cyclone Report, Hurricane Katrina" (National Hurricane Center, 2005), available at http://www.nhc.noaa.gov/pdf/TCR-AL122005_Katrina.pdf, p. 1.
- 110 U.S. Coast Guard, "The U.S. Coast Guard and Hurricane Katrina," available at <http://www.uscg.mil/History/katrina/katrinaindex.asp>.
- 111 Amanda Ripley, "Hurricane Katrina: How the Coast Guard Gets it Right," *TIME*, October 23, 2005, available at <http://www.time.com/time/magazine/article/0,9171,1122007-3,00.html>.
- 112 O'Rourke, "Coast Guard Polar Icebreaker Modernization: Background, Issues, and Options for Congress," p. 2.
- 113 Ibid., p. 18.

About the authors

Lawrence J. Korb is a Senior Fellow at American Progress and a senior advisor to the Center for Defense Information. Prior to joining American Progress, he was a senior fellow and director of national security studies at the Council on Foreign Relations. Prior to joining the council, Korb served as director of the Center for Public Policy Education and senior fellow in the Foreign Policy Studies Program at the Brookings Institution; dean of the University of Pittsburgh's Graduate School of Public and International Affairs; vice president of corporate operations at the Raytheon Company; and director of defense studies at the American Enterprise Institute.

Korb served as assistant secretary of defense—manpower, reserve affairs, installations, and logistics—from 1981 through 1985. In that position, he administered about 70 percent of the defense budget. For his service in that position, he was awarded the Department of Defense's medal for distinguished public service. Dr. Korb served on active duty for four years as Naval Flight Officer and retired from the Naval Reserve with the rank of captain.

Sean Duggan is a Research Associate for national security at the Center for American Progress. He works primarily on military affairs and other related U.S. foreign policy and international security issues. Duggan's work has been featured in *The New York Times*, *The Washington Post*, *Los Angeles Times*, *International Herald Tribune*, and *The Boston Globe*. He has also been published in *The New Republic*, *The Nation*, the Johns Hopkins University's *Transatlantic Relations Journal*, and *Political Science and Politics Magazine*. Sean's first book, *Serving America's Veterans*, which he coauthored with his colleagues at the Center, was published in August 2009.

Laura Conley is a Research Assistant for National Security and International Policy. In this position, she focuses primarily on military and defense issues. She graduated from Wesleyan University with high honors in government and a certificate in international relations. Her work has appeared in *The Boston Globe*, *The Baltimore Sun*, and *The American Interest*, among other publications.

Acknowledgements

The authors gratefully acknowledge the excellent editing and design assistance of Ed Paisley, Dan Wagener, Annie Schutte, and Lauren Ferguson. We are also in debt to our intern Gianluca La Manno for his assistance on this project.

The Center for American Progress is a nonpartisan research and educational institute dedicated to promoting a strong, just and free America that ensures opportunity for all. We believe that Americans are bound together by a common commitment to these values and we aspire to ensure that our national policies reflect these values. We work to find progressive and pragmatic solutions to significant domestic and international problems and develop policy proposals that foster a government that is “of the people, by the people, and for the people.”

