



QUADRENNIAL DEFENSE REVIEW REPORT

FEBRUARY 2010



QDR

Quadrennial Defense Review Report



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February 1, 2010

This Quadrennial Defense Review represents an important step toward fully institutionalizing the ongoing reform and reshaping of America's military—shifts that rebalance the urgent demands of today and the most likely and lethal threats of the future.

This is truly a wartime QDR. For the first time, it places the current conflicts at the top of our budgeting, policy, and program priorities, thus ensuring that those fighting America's wars and their families – on the battlefield, in the hospital, or on the home front – receive the support they need and deserve.

In addition, the QDR recognizes that we must prepare for a broad range of security challenges on the horizon—ranging from the military modernization programs of other countries to non-state groups developing more cunning and destructive means to attack the United States and our allies and partners.

Given this threat environment, the United States needs a broad portfolio of military capabilities with maximum versatility across the widest possible spectrum of conflict. Toward this end, the Department must continue to reform the way it does business—from developing and buying major weapons systems to managing our workforce.

The FY 2010 defense budget represented a down payment on re-balancing the department's priorities in keeping with the lessons learned and capabilities gained from the wars in Iraq and Afghanistan. Those shifts are continued in the FY 2011 budget and institutionalized in this QDR and out-year budget plan.

To meet the potential threats to our military's ability to project power, deter aggression, and come to the aid of allies and partners, this QDR directs more focus and investment in a new air-sea battle concept, long-range strike, space and cyberspace, among other conventional and strategic modernization programs.

Furthermore, this review brings fresh focus to the importance of preventing and deterring conflict by working with and through allies and partners, along with better integration with civilian agencies and organizations.

Finally, I would like to thank the members of this Department—military and civilian—along with our interagency and international partners, whose hard work and rigorous thought led to this important and historic document.

A handwritten signature in black ink, which appears to be "Robert M. Gates", is located at the bottom right of the page.

EXECUTIVE SUMMARY

The mission of the Department of Defense is to protect the American people and advance our nation's interests.

In executing these responsibilities, we must recognize that first and foremost, the United States is a nation at war. In Afghanistan, our forces fight alongside allies and partners in renewed efforts to disrupt, dismantle, and defeat Al Qaeda and the Taliban. In Iraq, U.S. military personnel advise, train, and support Iraqi forces as part of a responsible transition and drawdown. Above all, the United States and its allies and partners remain engaged in a broader war—a multifaceted political, military and moral struggle—against Al Qaeda and its allies around the world.

Furthermore, as a global power, the strength and influence of the United States are deeply intertwined with the fate of the broader international system—a system of alliances, partnerships, and multinational institutions that our country has helped build and sustain for more than sixty years. The U.S. military must therefore be prepared to support broad national goals of promoting stability in key regions, providing assistance to nations in need, and promoting the common good.

With these realities in mind, the 2010 Quadrennial Defense Review advances two clear objectives. First, to further rebalance the capabilities of America's Armed Forces to prevail in today's wars, while building the capabilities needed to deal with future threats. Second, to further reform the Department's institutions and processes to better support the urgent needs of the warfighter; buy weapons that are usable, affordable, and truly needed; and ensure that taxpayer dollars are spent wisely and responsibly.

The strategy and initiatives described in the QDR will continue to evolve in response to the security environment. Using the QDR as its foundation, the Department will continually examine its approach—from objectives to capabilities and activities to resources—to ensure its best alignment for the nation, its allies and partners, and our men and women in uniform.

A Complex Environment

The United States faces a complex and uncertain security landscape in which the pace of change continues to accelerate. The distribution of global political, economic, and military power is becoming more diffuse. The rise of China, the world's most populous country, and India, the world's largest democracy, will continue to shape an international system that is no longer easily defined—one in which the United States will remain the most powerful actor but must increasingly work with key allies and partners if it is to sustain stability and peace.

Globalization has transformed the process of technological innovation while lowering entry barriers for a wider range of actors to acquire advanced technologies. As technological innovation and global information flows accelerate, non-state actors will continue to gain influence and capabilities that, during the past century, remained largely the purview of states.

The proliferation of weapons of mass destruction (WMD) continues to undermine global security, further complicating efforts to sustain peace and prevent harmful arms races. The instability or collapse of a WMD-armed state is among our most troubling concerns. Such an occurrence could lead to rapid proliferation of WMD material, weapons, and technology, and could quickly become a global crisis posing a direct physical threat to the United States and all other nations.

Other powerful trends are likely to add complexity to the security environment. Rising demand for resources, rapid urbanization of littoral regions, the effects of climate change, the emergence of new strains of disease, and profound cultural and demographic tensions in several regions are just some of the trends whose complex interplay may spark or exacerbate future conflicts.

America's Global Role

America's interests are inextricably linked to the integrity and resilience of the international system. Chief among these interests are security, prosperity, broad respect for universal values, and an international order that promotes cooperative action.



President Barack Obama holds a briefing on Afghanistan with senior national security leaders including Vice President Joseph Biden, Secretary of Defense Robert Gates, and the Joint Chiefs of Staff in the Situation Room at the White House on Oct. 30, 2009. Official White House photo by Pete Souza.

Consistent with the President's vision, the United States will advance these interests by strengthening our domestic foundation and integrating all elements of national power, engaging abroad on the basis of mutual interest and mutual respect, and promoting an international order that advances our interests by reinforcing the rights and responsibilities of all nations.

America's interests and role in the world require armed forces with unmatched capabilities and a willingness on the part of the nation to employ them in defense of our interests and the common good. The United States remains the only nation able to project and sustain large-scale operations over extended distances. This unique position generates an obligation to be

responsible stewards of the power and influence that history, determination, and circumstance have provided.

Defense Strategy

In order to help defend and advance our national interests, the Department of Defense balances resources and risk among four priority objectives: prevail in today's wars, prevent and deter conflict, prepare to defeat adversaries and succeed in a wide range of contingencies, and preserve and enhance the All-Volunteer Force. These priorities shape not only considerations on the *capabilities* our Armed Forces need but also the aggregate *capacity* required to accomplish their missions now and in the future. Our approach to achieving them must evolve and adapt in response to a changing security environment.

Prevail in today's wars: We must ensure the success of our forces in the field—in Afghanistan, Iraq, and around the world. Along with our allies and partners, we have renewed efforts to help the governments of Afghanistan and Pakistan disrupt, dismantle, and defeat Al Qaeda and eliminate its safe havens within both nations. In Iraq, years of effort have helped enable that government to take the lead in protecting its people and providing essential services. As the responsible drawdown of the U.S. military presence proceeds, U.S. forces will continue to play important roles advising, training, and supporting Iraqi forces. Elsewhere, U.S. forces work with partners and allies to locate and dismantle terrorist networks.

In the near term to midterm, substantial numbers of U.S. forces will likely be operating in Afghanistan and U.S. forces in Iraq will continue a responsible drawdown. These efforts will substantially determine the size and shape of major elements of U.S. military forces for several years. In the mid- to long term, we expect there to be enduring operational requirements in Afghanistan and elsewhere to defeat Al Qaeda and its allies.

Prevent and deter conflict: America's enduring effort to advance common interests without resort to arms is a hallmark of its stewardship of the international system. Preventing the rise of threats to U.S. interests requires the integrated use of diplomacy, development, and defense, along with intelligence, law enforcement, and economic tools of statecraft, to help build the capacity of partners to maintain and promote stability. Such an approach also requires working closely with our allies and partners to leverage existing alliances and create conditions to advance common interests.

Our deterrent remains grounded in land, air, and naval forces capable of fighting limited and large-scale conflicts in environments where anti-access weaponry and tactics are used, as well as forces prepared to respond to the full range of challenges posed by state and non-state groups. These forces are enabled by cyber and space capabilities and enhanced by U.S. capabilities to deny adversaries' objectives through ballistic missile defense and counter-WMD, a resilient

infrastructure, and our global basing and posture. Until such time as the Administration's goal of a world free of nuclear weapons is achieved, nuclear capabilities will be maintained as a core mission for the Department of Defense. We will maintain a safe, secure, and effective nuclear arsenal to deter attack on the United States, and on our allies and partners.

While U.S. forces are heavily engaged in current wars, the Department's prevent-and-deter activities will be focused on ensuring a defense in depth of the United States; preventing the emergence or reemergence of transnational terrorist threats, including Al Qaeda; and deterring other potential major adversaries. In the future, as our forces transition into a period of less-intensive sustained operations, the Department's force planning assumes an ability to undertake a broader and deeper range of prevent-and-deter missions, acting wherever possible as part of a whole-of-government approach and in concert with allies and partners.

Prepare to defeat adversaries and succeed in a wide range of contingencies: If deterrence fails and adversaries challenge our interests with the threat or use of force, the United States must be prepared to respond in support of U.S. national interests. Not all contingencies will require the involvement of U.S. military forces, but the Defense Department must be prepared to provide the President with options across a wide range of contingencies, which include supporting a response to an attack or natural disaster at home, defeating aggression by adversary states, supporting and stabilizing fragile states facing serious internal threats, and preventing human suffering due to mass atrocities or large-scale natural disasters abroad.

In the mid- to long term, U.S. military forces must plan and prepare to prevail in a broad range of operations that may occur in multiple theaters in overlapping time frames. This includes maintaining the ability to prevail against two capable nation-state aggressors, but we must take seriously the need to plan for the broadest possible range of operations—from homeland defense and defense support to civil authorities, to deterrence and preparedness missions—occurring in multiple and unpredictable combinations.

Operations over the past eight years have stressed the ground forces disproportionately, but the future operational landscape could also portend significant long-duration air and maritime campaigns for which the U.S. Armed Forces must be prepared.

Preserve and enhance the All-Volunteer Force: Years of war have significantly stressed our military personnel and their families. Given the continuing need for substantial and sustained deployments in conflict zones, the Department must do all it can to take care of our people—physically and psychologically. For too long, the health of the All-Volunteer Force, the civilian workforce that supports it, and the processes by which the Department provides needed equipment and platforms have been underemphasized priorities. The prolonged wartime period since 2001 has greatly elevated their importance, and the consequences of failure have accordingly become more serious. To reflect the urgency that the Department's leadership places

on these issues, the QDR has striven to include them as core components of our policy, planning, and programming considerations.

Our preserve-and-enhance efforts will focus on transitioning to sustainable rotation rates that protect the force's long-term health. The Department plans that in times of significant crisis, U.S. forces will be prepared to experience higher deployment rates and briefer dwell periods for up to several years at a time and/or to mobilize the Reserve Component. This will typically be necessary if the United States is engaged for long periods in more than one large operation, such as Operation Iraqi Freedom. The Department will also expand its Civilian Expeditionary Workforce (CEW) to augment the military effort as required.

These four priority objectives are at once timely and enduring. They capture the Department's key priorities and drive considerations about the size and shape of America's Armed Forces now and in the future. Successfully balancing them requires that the Department make hard choices on the level of resources required as well as accepting and managing risk in a way that favors success in today's wars.

Rebalancing the Force

In order to successfully protect and advance U.S. interests while balancing the priority objectives outlined above, the QDR makes a series of recommendations aimed at helping to rebalance America's Armed Forces to better enable success in the following missions critical to protecting and advancing the nation's interests. Required force enhancements were identified by examining ongoing conflicts as well as the performance of the current and planned force through combinations of scenarios spanning the range of plausible future challenges. Significant enhancements were directed in the following key mission areas:

Defend the United States and support civil authorities at home: The rapid proliferation of destructive technologies, combined with potent ideologies of violent extremism, requires sustaining a high level of vigilance against terrorist threats. Moreover, state adversaries are acquiring new means to strike targets at greater distances from their borders and with greater lethality. The United States must also be prepared to respond to the full range of potential natural disasters.

The QDR directs a series of enhancements, including:

- Improve the responsiveness and flexibility of consequence management response forces;
- Enhance capabilities for domain awareness;
- Accelerate the development of standoff radiological/nuclear detection capabilities; and
- Enhance domestic capabilities to counter improvised explosive devices (IEDs).

Succeed in counterinsurgency, stability, and counterterrorism operations: The United States must retain the capability to conduct large-scale counterinsurgency, stability, and counterterrorism operations in a wide range of environments. In order to ensure that America's Armed Forces are prepared for this complex mission, it is vital that the lessons from today's conflicts be further institutionalized in military doctrine, training, capability development, and operational planning.

QDR initiatives include:

- Increase the availability of rotary-wing assets;
- Expand manned and unmanned aircraft systems (UASs) for intelligence, surveillance, and reconnaissance (ISR);
- Increase key enabling assets for special operations forces (SOF);
- Increase counterinsurgency, stability operations, and counterterrorism competency and capacity in general purpose forces;
- Increase regional expertise for Afghanistan and Pakistan; and
- Strengthen key supporting capabilities for strategic communication.

Build the security capacity of partner states: Since the end of World War II, DoD has worked to build the security capacity of allied and partner states and to ensure that the Armed Forces of the United States have ample opportunities to train with and learn from counterpart forces. As ongoing conflicts in Afghanistan and Iraq make clear, these dimensions of U.S. defense strategy have never been more important.

Key QDR initiatives in this mission area include:

- Strengthen and institutionalize general purpose force capabilities for security force assistance;
- Enhance linguistic, regional, and cultural ability;
- Strengthen and expand capabilities for training partner aviation forces;
- Strengthen capacities for ministerial-level training; and
- Create mechanisms to expedite acquisition and transfer of critical capabilities to partner forces.

Deter and defeat aggression in anti-access environments: U.S. forces must be able to deter, defend against, and defeat aggression by potentially hostile nation-states. This capability is fundamental to the nation's ability to protect its interests and to provide security in key regions.

In the absence of dominant U.S. power projection capabilities, the integrity of U.S. alliances and security partnerships could be called into question, reducing U.S. security and influence and increasing the possibility of conflict.

The QDR directs the following enhancements:

- Expand future long-range strike capabilities;
- Exploit advantages in subsurface operations;
- Increase the resiliency of U.S. forward posture and base infrastructure;
- Assure access to space and the use of space assets;
- Enhance the robustness of key ISR capabilities;
- Defeat enemy sensors and engagement systems; and
- Enhance the presence and responsiveness of U.S. forces abroad.

Prevent proliferation and counter weapons of mass destruction: The potential spread of weapons of mass destruction poses a grave threat. As the ability to create and employ weapons of mass destruction spreads globally, so must our combined efforts to detect, interdict, and contain the effects of these weapons. Deterrence of such threats and defense against them can be enhanced through measures aimed at better understanding potential threats, securing and reducing dangerous materials wherever possible, positioning forces to monitor and track lethal agents and materials and their means of delivery, and, where relevant, defeating the agents themselves.

Through the QDR, the Secretary of Defense directs the following:

- Establish a Joint Task Force Elimination Headquarters to plan, train, and execute WMD-elimination operations;
- Research countermeasures and defense to nontraditional agents;
- Enhance nuclear forensics;
- Secure vulnerable nuclear materials;
- Expand the biological threat reduction program; and
- Develop new verification technologies.

Operate effectively in cyberspace: The security environment demands improved capabilities to counter threats in cyberspace. In the 21st century, modern armed forces simply cannot conduct effective high-tempo operations without resilient, reliable information and communication networks and assured access to cyberspace. DoD must actively defend its networks.

DoD is taking several steps to strengthen capabilities in cyberspace:

- Develop a more comprehensive approach to DoD operations in cyberspace;
- Develop greater cyber expertise and awareness;
- Centralize command of cyber operations; and
- Enhance partnerships with other agencies and governments.

Guiding the Evolution of the Force

In combination and over time, the initiatives described in the QDR are designed to significantly enhance the ability of U.S. forces to protect and advance U.S. interests in both the near and longer term. In addition to better preparing our own forces for the future, these initiatives will improve the Department's ability to build the capability and capacity of partners.

Changes directed under the QDR can be broadly characterized by the following trends:

- U.S. ground forces will remain capable of full-spectrum operations, with continued focus on capabilities to conduct effective and sustained counterinsurgency, stability, and counterterrorist operations alone and in concert with partners.
- U.S. naval forces likewise will continue to be capable of robust forward presence and power projection operations, even as they add capabilities and capacity for working with a wide range of partner navies. The rapid growth in sea- and land-based ballistic missile defense capabilities will help meet the needs of combatant commanders and allies in several regions.
- U.S. air forces will become more survivable as large numbers of fifth-generation fighters join the force. Land-based and carrier-based aircraft will need greater average range, flexibility, and multimission versatility in order to deter and defeat adversaries that are fielding more potent anti-access capabilities. We will also enhance our air forces' contributions to security force assistance operations by fielding within our broader inventory aircraft that are well-suited to training and advising partner air forces.
- The United States will continue to increase the capacity of its special operations forces and will enhance their capabilities through the growth of organic enablers and key support assets in the general purpose forces.
- The capabilities, flexibility, and robustness of U.S. forces across the board will be improved by fielding more and better enabling systems, including ISR, electronic attack capabilities, communications networks, more resilient base infrastructure, and enhanced cyber defenses.

Of course, many of these enhancements will be costly. The QDR report describes some of the tradeoffs that DoD's leaders have identified to enable the rebalancing of U.S. military capabilities. More such tradeoffs could be necessary in the future.

Early in the QDR and as part of the process of completing DoD's budget submission for FY 2010, the Secretary took action to direct resources away from lower-priority programs and activities so that more pressing needs could be addressed, both within that budget and in the years that follow it. Those decisions included ending production of the F-22 fighter, restructuring the procurement of the DDG-1000 destroyer and the Future Combat Systems programs, deferring production of new maritime prepositioning ships, and stretching out procurement of a new class of aircraft carrier. The Air Force is substantially reducing its fleet of older fourth-generation fighter aircraft.

In addition to these steps, DoD is proposing in its budget submission for FY 2011 to shut down production of the C-17 airlift aircraft, having completed the planned procurement of those aircraft. DoD has also decided to delay the command ship replacement (LCC) program and to extend the life of existing command ships, cancel the CG(X) cruiser, and terminate the Net Enabled Command and Control program. Those actions, among others, have enabled the Department to redirect resources into the high-priority areas outlined above.

Where it has not been possible to set in motion initiatives to meet certain future operational needs, the Secretary has identified vectors for the evolution of the force, calling on DoD components to devote sustained efforts toward developing new concepts and capabilities to address those needs. Assessments of future operating environments will continue, with an eye toward refining our understanding of future needs. At the same time, the Department will continue to look assiduously for savings in underperforming programs and activities, divestiture, technology substitution, less-pressing mission and program areas, and other accounts so that more resources can be devoted to filling these gaps.

Taking Care of Our People

America's men and women in uniform constitute the Department's most important resource. Multiple long deployments are taking a significant toll on our people and their families, and the Department remains focused on their health and welfare. As part of this focus, the QDR has elevated the need to preserve and enhance the All-Volunteer Force and included this priority in our force planning and in our strategy



U.S. Army Sgt. Noel Rodriguez shares a moment with his two daughters—Emily, left, and Noemi, right—and wife Lily during a homecoming at Victory Field, Calif., Aug. 18, 2009. U.S. Army photo by Cpl. Nicole Lavine.

deliberations. In order to better take care of our people, the Department is focusing on several fronts.

Wounded warrior care: Our wounded, ill, or injured service members deserve every opportunity to return to active duty following their recovery, or to make a seamless transition to veteran status if they cannot be returned to active duty. Apart from prevailing in current conflicts, caring for our wounded warriors is our highest priority, and we will work to provide them top-quality care that reflects their service and sacrifice. The Department is improving the treatment of our wounded warriors in many ways, which include:

- Increasing funding for wounded warrior initiatives across the Military Departments;
- Improving health benefits and adding additional personnel for wounded warrior support programs; and
- Broadening the scope and quality of information sharing between the Department of Defense and Veterans Affairs to strengthen continuity of care and benefits delivery for military members.

Managing the deployment tempo: Doing everything possible to better manage a complex deployment tempo is an important aspect of the Department's commitment to our personnel and families. We must strive to provide them and their families with greater clarity and predictability regarding current and planned deployments. To this end, the Department continues to work toward increasing time spent between deployments to two years at home for every one deployed for the Active Component and five years demobilized for every one year mobilized for Guard and Reserve units.

Recruiting and retention: Our recruiting efforts are long-term investments that can yield generational gains. In this challenging wartime environment, the Department continues to meet its recruiting and retention goals. The Department must continue developing innovative programs to attract qualified young men and women into the Armed Forces, and to retain them. Examples of recent efforts include:

- Revising bonus policies to allow the Military Departments to pursue innovative ways to retain quality personnel; and
- Offering more flexible ways for military personnel to serve, by implementing programs designed to better enable transitions between Active and Reserve Component service.

Supporting families: We have a critical and enduring obligation to better prepare and support families during the stress of multiple deployments. Access to robust single member, spouse, child, and youth services is no longer a desirable option, but necessary, as these are services essential to maintain the health of the All-Volunteer Force. Examples of recent efforts include:

- Increasing resources devoted to institutionalizing service member and family support programs across the Department;
- Replacing or renovating a majority of DoD Educational Activity schools by 2015; and
- Continuing efforts of the Military Departments to improve family and community support services.

Developing future military leaders: The Department will continue its work to ensure that America's cadre of commissioned and noncommissioned officers are prepared for the full range of complex missions that the future security environment will demand. DoD will continue to place special emphasis on stability operations, counterinsurgency, and the building of partner capacity skill sets in its professional military education and career development policies. Examples of efforts in this area include:

- Building expertise in foreign language, regional, and cultural skills;
- Recognizing joint experience whenever and wherever it occurs in an officer's career; and
- Ensuring that the Department's educational institutions have the right resources and faculty that can help prepare the next generation of military leaders.

Developing the total defense workforce: The demands of a complex and uncertain security environment require the Department to assess whether it possesses the right workforce size and mix of military, government civilian, and contractor personnel. As part of these efforts, DoD will take the following steps:

- Improve the Civilian Expeditionary Workforce, which provides deployable civilian experts to Afghanistan, Iraq, and other theaters; and
- Work to reduce the number of support service contractors, thereby helping to establish a balanced workforce that appropriately aligns functions to the public and private sector.

Strengthening Relationships

Achieving the Department's strategic objectives requires close collaboration with counterparts at home and with key allies and partners abroad. Through its foreign defense relationships, the United States not only helps avert crises but also improves its effectiveness in responding to them. Moreover, by integrating U.S. defense capabilities with other elements of national security—including diplomacy, development, law enforcement, trade, and intelligence—the nation can ensure that the right mix of expertise is at hand to take advantage of emerging opportunities and to thwart potential threats. The Department will take the following steps:

Strengthening key relationships abroad: America's power and influence are enhanced by sustaining a vibrant network of defense alliances and new partnerships, building cooperative approaches with key states, and maintaining interactions with important international institutions such as the United Nations. Recognizing the importance of fostering and improving military and defense relations with allies and partners, the Department continues to emphasize tailored approaches that build on shared interests and common approaches.

Evolving U.S. global defense posture: The United States is a global power with global responsibilities. Including operations in Afghanistan and Iraq, approximately 400,000 U.S. military personnel are forward-stationed or rotationally deployed around the world. The United States will continue to tailor its defense posture to enhance other states' abilities to solve global security problems, and to address challenges including ongoing conflicts, the proliferation of nuclear technology and theater ballistic missiles, anti-access and area-denial capabilities, and maintaining secure access to the global commons.

Improving unity of effort: The Department remains committed to further improving a whole-of-government approach to national security challenges. From improving our partnership with the Department of State in conflict zones, to our enduring relationship with America's intelligence community, to supporting civil authorities at home through our partnership with the Department of Homeland Security, the Department of Defense will closely cooperate with other U.S. departments and agencies to better protect and advance America's interests.

Reforming How We Do Business

Years of war have demanded that America's Armed Forces rapidly innovate and adapt—the Department's institutional base must do the same. The QDR highlights several issues requiring particular attention.

Reforming security assistance: Despite the recognition that our security is increasingly tied to building partner capacity, our security assistance tool kit has not kept pace. America's security assistance efforts remain constrained by a complex patchwork of authorities, persistent shortfalls in resources, unwieldy processes, and a limited ability to sustain long-term efforts. The Department is working to improve its internal efforts, ensure that urgent warfighter needs are met—through such means as the Commander's Emergency Response Program, the Afghanistan Security Forces Fund, and the Iraq Security Forces Fund—and work with interagency partners to create new and more responsive mechanisms for security assistance.

Reforming how we buy: The conventional acquisition process is too long and too cumbersome to fit the needs of the many systems that require continuous changes and upgrades—a challenge that will become only more pressing over time. The Department will improve how it matches requirements with mature technologies, maintains disciplined systems engineering approaches,

institutionalizes rapid acquisition capabilities, and implements more comprehensive testing. We must avoid sacrificing cost and schedule for promises of improved performance. Our efforts must also include reforming the U.S. export control system for the 21st century, and spurring continued improvements in the provision of rapid logistical support to our forces abroad.

Strengthening the industrial base: America's security and prosperity are increasingly linked with the health of our technology and industrial bases. In order to maintain our strategic advantage well into the future, the Department requires a consistent, realistic, and long-term strategy for shaping the structure and capabilities of the defense technology and industrial bases—a strategy that better accounts for the rapid evolution of commercial technology, as well as the unique requirements of ongoing conflicts.

Reforming the U.S. export control system: Today's export control system is a relic of the Cold War and must be adapted to address current threats. The current system impedes cooperation, technology sharing, and interoperability with allies and partners, hindering U.S. industrial competitiveness. The Department will work with interagency partners and with Congress to ensure that a new system fully addresses the threats the U.S. will face in the future.

Crafting a strategic approach to climate and energy: Climate change and energy will play significant roles in the future security environment. The Department is developing policies and plans to manage the effects of climate change on its operating environment, missions, and facilities. The Department already performs environmental stewardship at hundreds of DoD installations throughout the United States, working to meet resource efficiency and sustainability goals. We must continue incorporating geostrategic and operational energy considerations into force planning, requirements development, and acquisition processes.

Balancing for a Complex Future

The priorities advanced in the QDR, coupled with both the FY 2010 and FY 2011 budgets reflect the Secretary's consistent emphasis on ensuring the Department does everything possible to enable success in today's wars while preparing for a complex and uncertain future. This QDR report and the preceding months of deliberation served two purposes: first, to establish the Department's key priority objectives, providing context and recommendations regarding capability development and investment portfolios; and second, to communicate the Secretary's intent for the next several years of the Department's work. The QDR thus serves as a critical capstone document, shaping how the Department of Defense will support America's men and women in uniform today, and building the policy and programmatic foundation for security in the years to come.

Main Elements of U.S. Force Structure

Taking into account the demands of a dynamic and complex security environment, the requirements of U.S. defense strategy, the need for enhancements to key capabilities across a wide range of missions, and the need for forces with sufficient aggregate capacity to meet the criteria laid out above, DoD has determined that U.S. forces, for the duration of the FY 2011–15 Future Years Defense Program (FYDP), will conform to the general parameters outlined below. Where ranges of force elements are provided, these reflect variations in force levels that are planned across the FYDP.

Department of the Army:

4 Corps headquarters

18 Division headquarters

73 total brigade combat teams (BCTs) (45 Active Component [AC] and 28 Reserve Component [RC]), consisting of:

40 infantry brigade combat teams (IBCTs)

8 Stryker brigade combat teams (SBCTs)

25 heavy brigade combat teams (HBCTs)

21 combat aviation brigades (CABs) (13 AC and 8 RC)

15 Patriot battalions; 7 Terminal High Altitude Area Defense (THAAD) batteries

Department of the Navy:

10 – 11 aircraft carriers and 10 carrier air wings

84 – 88 large surface combatants, including 21 – 32 ballistic missile defense-capable combatants and Aegis Ashore

14 – 28 small surface combatants (+14 mine countermeasure ships)

29 – 31 amphibious warfare ships

53 – 55 attack submarines and 4 guided missile submarines

126 – 171 land-based intelligence, surveillance, reconnaissance (ISR) and electronic warfare (EW) aircraft (manned and unmanned)

3 maritime prepositioning squadrons

30 – 33 combat logistics force ships (+1 Mobile Landing Platform (MLP))

17 – 25 command and support vessels (including Joint High Speed Vessels, 3 T-AKE Class dry cargo/ammunition ships, 1 mobile landing platform)

51 roll-on/roll-off strategic sealift vessels

The formations and platform types shown here generally encompass only the major combat elements of each of the military departments. Nuclear forces, which will be detailed in the report of the Nuclear Posture Review, are not shown here.

Main Elements of U.S. Force Structure (continued)

- 3 Marine expeditionary forces
 - 4 Marine divisions (3 AC and 1 RC)
 - 11 infantry regiments
 - 4 artillery regiments
 - 4 Marine aircraft wings (6 fixed-wing groups, 7 rotary-wing groups, 4 control groups, 4 support groups)
 - 4 Marine logistics groups (9 combat logistics regiments)
 - 7 Marine expeditionary unit command elements

Department of the Air Force:

- 8 ISR wing-equivalents (with up to 380 primary mission aircraft)
- 30 – 32 airlift and aerial refueling wing-equivalents (with 33 primary mission aircraft per wing-equivalent)
- 10 – 11 theater strike wing-equivalents (with 72 primary mission aircraft per wing-equivalent)
- 5 long-range strike (bomber) wings (with up to 96 primary mission aircraft)
- 6 air superiority wing-equivalents (with 72 primary mission aircraft per wing-equivalent)
- 3 command and control wings and 5 fully operational air and space operations centers (with a total of 27 primary mission aircraft)
- 10 space and cyberspace wings

Special Operations Forces:

Approximately 660 special operations teams (includes Army Special Forces Operational Detachment-Alpha[ODA] teams, Navy Sea, Air, and Land [SEAL] platoons, Marine special operations teams, Air Force special tactics teams, and operational aviation detachments [OADs])

- 3 Ranger battalions
- 165 tilt-rotor/fixed-wing mobility and fire support primary mission aircraft

The above parameters rightly reflect the heavy demands being placed on portions of the force by today's wars. As these demands evolve, so too may the appropriate size and mix of forces.

INTRODUCTION

The Department of Defense conducted the 2010 Quadrennial Defense Review (QDR) from February 2009 through January 2010.

From the outset, this QDR aimed at advancing two objectives. The first was to further rebalance the capabilities of the U.S. Armed Forces and institutionalize successful wartime innovations to better enable success in today's wars while ensuring that our forces are prepared for a complex future. Not only will the outcome of the conflicts in Afghanistan and Iraq shape the security environment for decades to come, but the character of these wars—with enemies hiding among populations, manipulating the information environment, and employing a challenging mix of tactics and technology—will be an important part of the future spectrum of conflict. The second objective was reform: For too long we have been slow to adapt our institutions and processes to support the urgent needs of our men and women in harm's way. From strategy and policy development to personnel and acquisition processes, it is imperative to further reform how we do business.

This QDR was strategy-driven. It began with an assessment of the emerging security environment and the many ways in which the U.S. Armed Forces may be called on to protect and advance the nation's interests. The Department used the 2008 National Defense Strategy and the strategic precepts of the President's fiscal year (FY) 2010 defense budget as touchstones for this assessment. It then worked closely with the White House, other departments and agencies, and key allies to refine its approach, ensuring consistency with the President's national security priorities and the Administration's major security reviews.

These efforts made clear that the United States and its allies and partners face a complex and uncertain security landscape in which the pace of change continues to accelerate. The rise of new powers, the growing influence of non-state actors, the spread of weapons of mass destruction and other destructive technologies, and a series of enduring and emerging socioeconomic trends will continue to pose profound challenges to international order.

America's leadership in this world requires a whole-of-government approach that integrates all elements of national power. Agile and flexible U.S. military forces with superior capabilities across a broad spectrum of potential operations are a vital component of this broad tool set, helping to advance our nation's interests and support common goals. The United States remains the only nation able to project and sustain large-scale combat operations over extended distances. This unique position generates an obligation to be responsible stewards of the power and influence that history, determination, and circumstance have provided.

To help defend and advance our national interests, the Department of Defense must balance resources and risk among four priority objectives: prevail in today's wars, prevent and deter conflict, prepare to defeat adversaries and succeed in a wide range of contingencies, and preserve and enhance the All-Volunteer Force.

In balancing resources and risk, the QDR recognized the current fiscal challenges facing the United States and made difficult tradeoffs where these were warranted. The QDR's goals in these four areas are well funded in the FY 2011 budget, providing sufficient resources to successfully execute the full range of missions called for in our strategy.

In order to determine the mix of military capabilities best suited to supporting the nation's defense strategy, the QDR was analytically grounded. The Secretary, advised by other senior civilian and military leaders within the Department, reviewed, modified, and endorsed a set of scenarios that the QDR used to help evaluate current and potential future forces. The analysis also focused heavily on assessing the needs of commanders and forces in the field today, principally in Afghanistan and Iraq, in order to ensure that the Department's leaders had a clear picture of the demands of ongoing operations.

The QDR analysis strongly suggested that the Department must further rebalance its policy, doctrine, and capabilities to better support the following six key missions:

- Defend the United States and support civil authorities at home;
- Succeed in counterinsurgency, stability, and counterterrorism operations;
- Build the security capacity of partner states;
- Deter and defeat aggression in anti-access environments;
- Prevent proliferation and counter weapons of mass destruction; and
- Operate effectively in cyberspace.

Although these missions do not encompass the totality of ways in which our Armed Forces serve, they are areas of particular need that require attention today and into the future.

Through the QDR, the Department developed and evaluated proposals for addressing gaps and shortfalls in the capabilities of the force. Once these proposals were vetted and their costs determined, the Secretary issued planning guidance to DoD components. This QDR guidance drove the development and review of the FY 2011 budget proposal and the Department's Future Years Defense Plan (FYDP) FY 2011–2015. In some cases the resulting investments serve as a down payment on capabilities that may not come to fruition for several years.

Beyond directing specific shifts in the capabilities required to accomplish the above missions, the QDR also considered the aggregate military capacity needed to prevail in a series of overlapping operations of varying character and intensity. The QDR force-sizing and force-shaping construct differentiates between current commitments and plausible future requirements, and forms the basis for determining the appropriate type and range of the main elements of U.S. force structure necessary to meet the needs of the defense strategy.

It is evident that years of war have imposed considerable strain on the All-Volunteer Force. Multiple long deployments are taking a significant toll on our people. Given the requirements of Afghanistan, Iraq, and other operations, the Department remains deeply committed to constantly assessing the health of the force. We will do all we can to ensure that our people are as prepared as possible for their wartime service while working to lessen the burden shouldered by our personnel and their families—the most important pillar of America’s defense.

Part of the Department’s obligation to defend and advance U.S. interests while taking care of our people is the imperative to reform how it does business. The Department is working to help build a whole-of-government approach to the provision of security assistance, improving our defense acquisition and logistics processes to better support our personnel in harm’s way, strengthening our technology and industrial bases to facilitate innovation, and crafting a strategic approach to climate and energy challenges.

Given the complex security environment and the range of missions, capabilities, and institutional reforms necessary to protect and advance U.S. interests, the QDR highlights the importance of revitalizing defense relationships with allies and partners in key regions. An important element of revitalizing key relationships is the need to craft an approach to the U.S. defense posture that emphasizes cooperation with allies and partners and retailoring military forces, facilities, and defense agreements across regions.

This QDR benefited from extensive engagement with key stakeholders. As the QDR generated insights and interim findings, these were shared with and reviewed by a wide range of experts, both within DoD and beyond. Over the course of the review, QDR staff consulted with and briefed congressional staff as well as representatives of allied and other governments. DoD officials also engaged with their counterparts elsewhere in the U.S. government to further the kind of integrated security approaches long advocated by the President, Secretary of Defense, and Secretary of State. For example, Defense leaders and staff worked closely with the Departments of State and Homeland Security, as well as the Intelligence Community, as they undertook their Quadrennial Diplomacy and Development Review, Quadrennial Homeland Security Review, and Quadrennial Intelligence Community Review respectively, sharing insights regarding analysis, key missions, capabilities, and plans in overlapping issue areas.

This QDR report and the preceding months of deliberation served two purposes: first, to establish the Department's key priority objectives, providing context and recommendations regarding capability development and investment portfolios; and second, to communicate the Secretary's intent for the next several years of the Department's work. The QDR thus serves as a critical capstone document, shaping how the Department of Defense will support America's men and women in uniform today, and building the policy and programmatic foundation for security in the years to come.

DEFENSE STRATEGY

A Complex Environment

The United States faces a series of challenges and opportunities at a time of significant change in the international system. More than eight years of war in Afghanistan, in Iraq, and against Al Qaeda and its allies have demanded sustained sacrifice from America's men and women in uniform.

In addition to ongoing conflicts, the United States faces a complex and uncertain security landscape in which the pace of change continues to accelerate. Not since the fall of the Soviet Union or the end of World War II has the international terrain been affected by such far-reaching and consequential shifts. The rise of new powers, the growing influence of non-state actors, the spread of weapons of mass destruction and other destructive enabling technologies, and a series of enduring and emerging trends pose profound challenges to international order.

The United States must demonstrate steadfast engagement to address these global challenges and capitalize on emerging opportunities. We must display a continued willingness to commit substantial effort to strengthen and reform the international order and, in concert with our allies and partners abroad, engage in cooperative, purposeful action in the pursuit of common interests.

Current Operations

The United States remains a nation at war. The outcome of today's conflicts will directly shape the global security environment for decades to come, and prevailing in current operations constitutes the Department's top priority.

The United States, along with our allies and partners, has renewed its efforts to help the governments of Afghanistan and Pakistan disrupt, dismantle, and defeat Al Qaeda and eliminate safe havens within both nations. By the end of 2010, approximately 100,000 American



Soldiers from Company A, Special Troops Battalion, 101st Airborne Division, perform an air assault into a village inside the Jowlzak valley in the Parwan province of Afghanistan. U.S. Army photo by Spc. Scott Davis.

military personnel will be fighting alongside allied and partner forces to deny Al Qaeda safe haven and reverse the Taliban's momentum. Recognizing that victory in Afghanistan ultimately lies with its people, U.S. and allied forces are focused on securing key population centers, training competent Afghan security forces, and partnering with them as they fight for their country's future.

Our efforts in Afghanistan are inextricably linked to our partnership with Pakistan—one based on mutual interest and respect. The United States is committed to strengthening Pakistan's capacity to target those extremists who threaten both countries, and our military partnership is strengthened as we cooperate to eliminate terrorist safe havens. Though our partnership with Pakistan is focused urgently on confronting Al Qaeda and its allies, America's interest in Pakistan's security and prosperity will endure long after the campaign ends.

While the epicenter of the terrorist threat to the United States is rooted in Afghanistan and Pakistan, the war against Al Qaeda and its allies continues around the world. We have become more adept at disrupting terrorist networks; nevertheless, our terrorist adversaries continue to learn and adapt, posing an enduring threat to the security of America and its allies and partners. Recognizing that sustainable success requires the patient and persistent application of all elements of U.S. and international power, we will continue to employ military force as necessary to defeat Al Qaeda and its allies.

In Iraq, years of effort and a critical shift toward a population-centered counterinsurgency strategy have helped enable the Iraqi government to take the lead in protecting its people and providing essential services. A sovereign, just, and accountable Iraqi state capable of sustaining national unity can serve as a long-term U.S. partner, and will buttress America's strategic goals and those of its allies. As the responsible drawdown of the U.S. military presence proceeds, U.S. forces will continue to play important roles advising, training, and supporting Iraqi forces.

The demands of these ongoing operations have strained America's Armed Forces, and many of our personnel have served multiple tours in Afghanistan, Iraq, and elsewhere. Recognizing these strains, and as described in further detail in this report, the Department has elevated the need to preserve and enhance the All-Volunteer Force in our policies, force planning, and budget priorities.

Key Geopolitical Trends

In addition to fully appreciating the influence that ongoing conflicts will have on the shape of the future security environment, the Department of Defense must remain cognizant of underlying dynamic global forces and trends that will significantly alter the contours of the international system.

The distribution of global political, economic, and military power is shifting and becoming more diffuse. The rise of China, the world's most populous country, and India, the world's largest democracy, will continue to reshape the international system. While the United States will remain the most powerful actor, it must increasingly cooperate with key allies and partners to build and sustain peace and security. Whether and how rising powers fully integrate into the global system will be among this century's defining questions, and are thus central to America's interests.

The continued growth and power of non-state actors will remain a key feature of the environment. Globalization has transformed the process of technological innovation while lowering entry barriers for a wider range of actors to develop and acquire advanced technologies. As technological innovation and global information flows accelerate, non-state actors will continue to gain influence and capabilities that, during the previous century, remained largely the purview of states.

The proliferation of weapons of mass destruction (WMD) continues to undermine global security, complicating efforts to sustain peace and prevent harmful arms races. Even as the United States and Russia make progress in reducing the number of deployed strategic nuclear weapons, other nations are pursuing nuclear weapons programs.¹ Moreover, Al Qaeda and other terrorist networks have demonstrated an interest in WMD. Perhaps most troubling would be the instability or collapse of a WMD-armed state. This could lead to rapid proliferation of WMD material, weapons, and technology, and could quickly become a global crisis posing a direct physical threat to the United States and all other nations.

A series of powerful cross-cutting trends, made more complex by the ongoing economic crisis, threatens to complicate international relations and make the exercise of U.S. statecraft more difficult. The rising demand for resources, rapid urbanization of littoral regions, the effects of climate change, the emergence of new strains of disease, and profound cultural and demographic tensions in several regions are just some of the trends whose complex interplay may spark or exacerbate future conflicts.

Shifting Operational Landscape

Lessons from ongoing conflicts and assessments of the likely security environment point to a challenging operational landscape for America's Armed Forces. Perhaps more than ever before, the United States requires joint military forces able to function and succeed across a wide geographic and operational spectrum. Moreover, military forces must be capable of working effectively with a range of civilian and international partners.

¹ The challenges associated with nuclear weapons in the current and projected security environment are outlined in the Department's Nuclear Posture Review.

Three features of the current and expected operational landscape are most pressing.

First, the continued dominance of America's Armed Forces in large-scale force-on-force warfare provides powerful incentives for adversaries to employ methods designed to offset our strengths. We see this dynamic at work today. From non-state actors using highly advanced military technology and sophisticated information operations to states employing unconventional technologies, our current adversaries have shown that they will tailor their strategies and employ their capabilities in sophisticated ways.

The term "hybrid" has recently been used to capture the seemingly increased complexity of war, the multiplicity of actors involved, and the blurring between traditional categories of conflict. While the existence of innovative adversaries is not new, today's hybrid approaches demand that U.S. forces prepare for a range of conflicts. These may involve state adversaries that employ protracted forms of warfare, possibly using proxy forces to coerce and intimidate, or non-state actors using operational concepts and high-end capabilities traditionally associated with states.

We must also anticipate the employment of other novel methods. Future adversaries may use surrogates including terrorist and criminal networks, manipulate the information environment in



U.S. Navy Information Systems Technician 2nd Class Athena Stovall, scans the network on her computer for intrusions during a cyber war training course at the Space and Naval Warfare Systems Center in Pearl City, Hawaii. U.S. Navy photo by Mass Communication Spec. 3rd Class Michael A. Lantron.

increasingly sophisticated ways, impede access to energy resources and markets, and exploit perceived economic and diplomatic leverage in order to complicate our calculus. Because such approaches may be difficult to detect or predict, the ability of our forces to rapidly innovate and adapt will become even more critical.

Second, as other powers rise and as non-state actors become more powerful, U.S. interests in, and assured access to, the global commons will take on added importance. The global commons are domains or areas that no one state

controls but on which all rely. They constitute the connective tissue of the international system. Global security and prosperity are contingent on the free flow of goods shipped by air or sea, as well as information transmitted under the ocean or through space.

A series of recent trends highlight growing challenges to stability throughout the global commons—from cyberspace attacks abroad and network intrusions here at home, to increased piracy, to anti-satellite weapons tests and the growth in the number of space-faring nations, to

the investments some nations are making in systems designed to threaten our primary means of projecting power: our bases, our sea and air assets, and the networks that support them.

Prudence demands that the Department prepare for possible future adversaries likely to possess and employ some degree of anti-access capability—the ability to blunt or deny U.S. power projection—across all domains. Given the proliferation of sophisticated weapons and technology, smaller states and some non-state actors may be able to acquire and employ longer-range and more precise weapons. Future adversaries will likely possess sophisticated capabilities designed to contest or deny command of the air, sea, space, and cyberspace domains.

Finally, the changing international environment will continue to put pressure on the modern state system, likely increasing the frequency and severity of the challenges associated with chronically fragile states. These states are often catalysts for the growth of radicalism and extremism. In some cases they are nuclear-armed or are critically important to enduring American interests. Over the course of the next several decades, conflicts are at least as likely to result from state weakness as from state strength.

America's Interests and the Roles of Military Power

America's interests are inextricably linked to the integrity and resilience of the international system. Chief among these interests are security, prosperity, broad respect for universal values, and an international order that promotes cooperative action.

Consistent with the President's vision, the United States will advance these interests by strengthening our domestic foundation and integrating all elements of national power, engaging abroad on the basis of mutual interest and mutual respect, and promoting an international order that advances our interests by reinforcing the rights and responsibilities of all nations.

America has been steadfast in supporting liberty, freedom, and open access to markets and ideas. The United States can lead only when others trust it to carry forward their best interests, to listen to their concerns, and to uphold the norms and values of the international community.

The United States remains committed to exercising mutual respect and leadership within the architecture of a just and effective international system. America's enemies fear its ability to build consensus against tyranny. Pursuing and underwriting a strong international order is an undertaking that benefits all nations, none more than the United States. This principle will guide the Department's interactions with the international community, and it frames our approach to defending the American people and promoting their interests.

America's interests and role in the world require Armed Forces with unmatched capabilities and a willingness on the part of the nation to employ them in defense of our national interests and the common good. The United States remains the only nation able to project and sustain large-scale

operations over extended distances. This unique position generates an obligation to be responsible stewards of the power and influence that history, determination, and circumstance have provided.

The role of the Department of Defense is to field, sustain, and employ the military capabilities needed to protect the United States and its allies and to advance our interests. In order to fulfill this role, the Department must continually assess how America's Armed Forces are evolving in relation to the wartime demands of today and the expected character of future challenges.

Strong regional allies and partners are fundamental to meeting 21st century challenges successfully. Helping to build their capacity can help prevent conflict from beginning or escalating, reducing the possibility that large and enduring deployments of U.S. or allied forces would be required.

As a global power, the United States has a broad range of tools for advancing its national interests described above. Whenever possible, we seek to pursue those interests through cooperation, diplomacy, economic development and engagement, and the power of America's ideas and values. When absolutely necessary, the United States and its allies have shown the willingness and ability to resort to force in defense of our interests and the common good.

Whenever possible, the United States will use force in an internationally sanctioned coalition with allies, international and regional organizations, and like-minded nations committed to these common principles. America's Armed Forces will retain the ability to act unilaterally and decisively when appropriate, maintaining joint, all-domain military capabilities that can prevail across a wide range of contingencies.

Despite those who disregard the rules of the international system, the United States must remain a standard-bearer in the conduct of war. The United States will maintain and support international norms by upholding the Geneva Conventions and by providing detainees and prisoners of war the rights and protections afforded to them under international law.

The evolution of modern warfare has brought significant advances in technology. The increasing precision, persistence, and autonomy of unmanned systems hold great promise. As these systems grow in capability and number, we must ensure that our policies on use of force advance accordingly.

Any decision to commit U.S. forces to hostile environments should be based on a consideration of U.S. and allied interests, including treaty commitments, and the likely costs and expected risks of military action. America's men and women in uniform should never be put at risk absent a clear mission and a realistic and sufficiently resourced plan to succeed. Our Soldiers, Sailors, Marines, Airmen, and Coast Guardsmen constitute our most critical strategic and most treasured resource. They deserve the unflinching support of a nation that clearly understands, from the

outset, why the All-Volunteer Force has been placed in harm's way and what risks and costs come with the use of military force.

U.S. Defense Objectives

In order to defend and advance our national interests, the Department of Defense must balance resources and risk among four priority objectives: prevail in today's wars, prevent and deter conflict, prepare to defeat adversaries and succeed in a wide range of contingencies, and preserve and enhance the All-Volunteer Force. These objectives reflect a strategic approach that can evolve and adapt in response to a changing security environment.

Prevail in Today's Wars

In today's conflicts, as in the past, America must ensure the success of its forces in the field.

Prevailing against Al Qaeda and the Taliban in Afghanistan and the border regions of Pakistan requires a comprehensive approach employing all elements of national power. Focusing our resources to protect the population of Afghanistan, our military and civilian efforts align with the following objectives:

- Reversing Taliban momentum through sustained military action by the United States, our NATO allies and contributing partners, and Afghanistan's security forces;
- Denying the Taliban access to and control of key population and production centers and lines of communication;
- Disrupting the Taliban outside secured areas and preventing Al Qaeda from regaining sanctuary in Afghanistan;
- Degrading the Taliban to levels manageable by the Afghan National Security Forces (ANSF);
- Increasing the size and capability of the ANSF and employing other local forces selectively to begin transitioning security responsibility to the Afghan government by July 2011; and
- Building the capacity of the Afghan government, particularly in key ministries.

Achieving these objectives requires a renewed international and whole-of-government effort, including the commitment of an additional 52,000 American military personnel to Afghanistan since January 2009 for a total U.S. force of approximately 100,000, with substantial increases in allied and partner commitments. The number of deployed forces and the challenging terrain make it imperative that the Department focus on rapidly increasing the number and quality of the key enablers—fixed- and rotary-wing lift, aerial delivery, unmanned aerial systems, and a range of other combat support and combat service support assets, as these are critical to success.

Prevailing in this conflict also requires focused attention on increasing the ability of U.S. forces to train and partner, especially in combat, with Afghan army and police forces. The next section of this report addresses these issues in detail.



American and Iraqi soldiers exit a helicopter during partnered air assault training, carried out by Iraqi commandos and scouts of 1st Iraqi Army Division and paratroopers of 2nd Battalion, 504th Parachute Infantry Regiment, 1st Brigade, 82nd Airborne Division (Advise and Assist Brigade), at Camp Ramadi, Iraq, on Nov. 15, 2009. DoD photo by Spc. Michael J. MacLeod, U.S. Army.

In Iraq, U.S. forces are working to transition efforts from combat to stability operations. U.S. forces will continue to implement the U.S.-Iraq Security Agreement by transitioning enduring functions primarily to the Iraqi government, with some activities shifting to the U.S. Embassy and other international organizations.

Integral to the U.S.-Iraq Security Agreement and consistent with presidential guidance, U.S. forces in Iraq continue to execute a responsible drawdown. By August 31, 2010, U.S. forces will have transitioned from combat and counterinsurgency activities to a more limited focus on training and advising the Iraqi Security Forces, conducting targeted counterterrorism operations, providing force protection for U.S. military and civilian personnel and facilities, and supporting civilian agencies and international organizations in their capacity-building efforts. U.S. forces also continue to provide key enablers to the Iraqi Security Forces, who have assumed the lead for security responsibility in Iraq.

Further drawdown activity will occur in accordance with the U.S.-Iraq Security Agreement to redeploy all U.S. forces by December 31, 2011. The pace of the drawdown will be commensurate with Iraq's improving security while providing U.S. commanders sufficient flexibility to assist the Iraqis with emerging challenges. Even as U.S. forces are redeployed, the United States will continue to pursue sustained political engagement and regional diplomacy.

The continuing fight against Al Qaeda and its allies in Afghanistan and elsewhere will demand continued vigilance and determination. Prevailing against this multifaceted enemy requires an extensive array of tools for ready and effective military, intelligence, diplomatic, and law enforcement action. These capabilities must be dedicated, responsive, and appropriately resourced to prevail against an adaptive adversary. The defense contribution to this effort takes two basic forms: a highly capable network of special operations and intelligence capabilities designed to seek out, identify, and eliminate Al Qaeda's leadership, dismantle its networks, and

erode its effectiveness; and an enduring effort to build the security capacity of key partners around the world, where improved local and regional capability and capacity can reduce the size and number of Al Qaeda's safe havens and prevent their regeneration.

Prevent and Deter Conflict

America's enduring effort to advance common interests without resort to arms is a hallmark of its stewardship of the international system. Preventing the rise of threats to U.S. interests requires the integrated use of diplomacy, development, and defense, along with intelligence, law enforcement, and economic tools of statecraft to help build the capacity of partners to maintain and promote stability. Such an approach also requires working closely with our allies and partners to leverage existing alliances and create conditions to advance common interests.



Sgt. Eric Petersen and British Army Maj. James J.M. Driscoll, discuss operations in Garmsir City District, Helmand Province, Afghanistan during a relief-in-place. U.S. Marine Corps photo by Cpl Alex C. Guerra.

The Department defends the United States from direct attack, deters potential adversaries, fosters regional security, and assures access to the global commons by pursuing the following efforts:

- Assisting partners in developing and acquiring the capabilities and systems required to improve their security capacity;
- Enhancing U.S. capabilities to train, advise, and assist partner-nation security forces and contribute to coalition and peacekeeping operations;
- Maintaining awareness of the global environment to identify potential threats and emerging opportunities;
- Supporting U.S. diplomatic and development efforts to foster a range of governance efforts and to counter radicalization, including working with civilian agencies on security assistance and police training programs;
- Extending a global defense posture composed of joint, ready forces forward-stationed and rotationally deployed to prevail across all domains, prepositioned equipment and overseas facilities, and international agreements;

- Contributing to an appropriately sized and shaped portfolio of homeland defense and civil support capabilities integrated with U.S. homeland security activities;
- Protecting critical DoD infrastructure, including in space and cyberspace; and
- Sustaining a safe, secure, and effective nuclear arsenal at the lowest levels consistent with U.S. and allied interests as we pursue the peace and security of a world free of nuclear weapons.

Credibly underwriting U.S. defense commitments will demand tailored approaches to deterrence. Such tailoring requires an in-depth understanding of the capabilities, values, intent, and decision making of potential adversaries, whether they are individuals, networks, or states. Deterrence also depends on integrating all aspects of national power.

The United States is positioned with capabilities across all domains to deter a wide range of attacks or forms of coercion against the United States and its allies. Until such time as the Administration's goal of a world free of nuclear weapons is achieved, nuclear capabilities will be maintained as a core mission for the Department of Defense. We will maintain a safe, secure, and effective nuclear arsenal to deter attack on the United States, and on our allies and partners. Deterrence also depends on land, air, and naval forces capable of fighting limited and large-scale conflicts in environments where anti-access weaponry and tactics are used, as well as forces prepared to respond to the full range of challenges posed by state and non-state groups. These forces are enabled by cyberspace and space capabilities, and enhanced by U.S. capabilities to deny adversaries' objectives through ballistic missile defense and counter-WMD, resilient infrastructure (including command and control systems), and global basing and posture. The United States is strengthening its approach to deterrence in multiple ways.

- The Department of Defense continues to improve its ability to attribute WMD, space, and cyberspace attacks in order to hold aggressors responsible and deny them the ability to evade detection in new domains or use proxies.
- To reinforce U.S. commitments to our allies and partners, we will consult closely with them on new, tailored, regional deterrence architectures that combine our forward presence, relevant conventional capabilities (including missile defenses), and continued commitment to extend our nuclear deterrent. These regional architectures and new capabilities, as detailed in the Ballistic Missile Defense Review and the forthcoming Nuclear Posture Review, make possible a reduced role for nuclear weapons in our national security strategy.
- America's resilience—robustness, adaptability, and capacity for rapid recovery—is an important dimension of our deterrent posture. So too is America's ability to assist allies in responding to both attacks and natural disasters.

- The United States will work with like-minded nations to foster norms regarding behavior in domains where an attack on one nation has consequences for all—especially in space and cyberspace.

Prepare to Defeat Adversaries and Succeed in a Wide Range of Contingencies

If deterrence fails and adversaries challenge our interests with the threat or use of force, the United States must be prepared to respond in support of U.S. national interests.

The range of plausible future challenges is significant; DoD requirements to deal with such challenges include the following:

- Defeating Al Qaeda and its allies;
- Supporting a national response to attacks on, or natural disasters in, the United States;
- Defeating aggression by adversary states, including states armed with advanced anti-access capabilities and/or nuclear weapons;
- Locating, securing, or neutralizing weapons of mass destruction, key materials, and related facilities in the context of a loss of control of such weapons or materials, and thwarting the potential for a non-state adversary to acquire them;
- Supporting and stabilizing fragile states facing threats from terrorist and insurgent groups;
- Protecting American citizens in harm's way overseas;
- Conducting effective operations in cyberspace; and
- Preventing human suffering due to mass atrocities or large-scale natural disasters abroad.

These types of challenges are not necessarily distinct. Indeed, our future operational environment is likely to entail complex combinations of multiple challenges. As described earlier, America's potential adversaries are likely to employ a hybrid mix of approaches and capabilities if and when they choose to oppose the United States, its allies, or its partners. As will be outlined in the next section, U.S. forces must be sized and shaped to provide the maximum possible versatility for the broadest plausible range of conflicts.

Preserve and Enhance the All-Volunteer Force

In order to succeed in today's wars and prepare for the future, the Department of Defense must ensure the long-term viability of the All-Volunteer Force, its most precious military resource. This will require policies that sustain the rotation base, provide care for our people—service members and their families—in peace and conflict, and adapt as required by the environment.



U.S. Sailors assigned to Navy Recruiting Command Great Lakes, Division 929, stand in formation for the Janesville, Wis. Memorial Day Celebration on May 25, 2009. U.S. Navy photo by Senior Chief Mass Communication Spc. Gary Ward.

Years of war have significantly stressed our military personnel and their families. Although a strong sense of purpose and demonstrated operational excellence are shared across all Services and ranks, indicators of strain on the force—from retention levels in key commissioned and noncommissioned officer ranks, to increased rates of combat stress and substance abuse, and to even more tragic outcomes such as increased levels of suicide and divorce—are cause for concern. Given

the continuing need for substantial and sustained deployments in conflict zones, the Department must do all it can to take care of our people—physically and psychologically. The health of the All-Volunteer Force depends on substantial and enduring efforts to track and improve physical and mental health, readiness, family support, and leader development programs across the force.

Now and for several years upon completion of operations we must reset equipment lost through combat and the strain of today's wars. In many cases, this process will not require wholesale replacement of our current generation of military platforms. Rather, it will necessitate more practical and efficient procurement processes and programs and hard choices about our future capability needs. Toward this end the Department must continue to elevate the importance of its acquisition efforts and work to reform what and how we buy. From ensuring greater responsiveness and integrity in the acquisition process, to enhancing resource allocation decisions, to improving cost analysis and program execution, the Department will work to meet its obligation to provide our forces with the capabilities they need when they need them while exercising good fiscal stewardship.

For too long, the health of the All-Volunteer Force, the civilian workforce that supports it, and the processes by which the Department provides needed equipment and platforms have been underemphasized priorities. The prolonged wartime period since 2001 has greatly elevated their importance, and the consequences of failure have accordingly become more serious. To reflect the urgency that the Department's leadership places on these issues, the QDR has striven to include them as core components of our policy, planning, and programming considerations.

REBALANCING THE FORCE

This QDR has explicitly linked force planning, which determines the overall size and capabilities of the Armed Forces, to the priority objectives of the defense strategy: prevail in today's wars; prevent and deter conflict; prepare to succeed in a wide range of contingencies, both near- and longer-term; and preserve and enhance the force. The QDR developed insights regarding the ways in which the capabilities of U.S. forces should evolve by evaluating alternative future forces in a diverse set of scenarios, which depicted a wide range of plausible challenges that might call for a response by U.S. military forces. The Department also assessed lessons learned from ongoing operations in Iraq, Afghanistan, and elsewhere. Collectively, these assessments helped inform decisions affecting capabilities in six key mission areas:

- Defend the United States and support civil authorities at home;
- Succeed in counterinsurgency, stability, and counterterrorism operations;
- Build the security capacity of partner states;
- Deter and defeat aggression in anti-access environments;
- Prevent proliferation and counter weapons of mass destruction; and
- Operate effectively in cyberspace.

Analysis focused on identifying gaps in capabilities and shortfalls in capacity that programmed forces might encounter in executing these missions over the near-term, midterm-, and longer term. Insights regarding those gaps and shortfalls helped focus efforts to improve the “fit” between programmed forces and the demands that may be placed on them in future operations. Those efforts have resulted both in specific initiatives to address gaps and shortfalls and in guidance intended to shape the evolution of the force and its capabilities over the longer term. Some initiatives involve investments in new or existing systems. Others involve creating new units within the force to perform functions that are in high demand. Still others involve adjustments to training, doctrine, or force posture.² These choices require managing a degree of risk over time and across components—a later section of this report details DoD's risk management framework.

² By congressional direction, DoD has conducted reviews of U.S. nuclear strategy and forces, ballistic missile defense, and space assets and operations in addition to the QDR. The findings of these reviews are being reported separately, but key insights were drawn on for this report.

QDR analyses pointed emphatically to two overarching conclusions. The first is that U.S. forces would be able to perform their missions more effectively—both in the near-term and against future adversaries—if they had more and better key enabling capabilities at their disposal. These enablers include rotary-wing aircraft, unmanned aircraft systems, intelligence analysis and foreign language expertise, and tactical communications networks for ongoing operations, as well as more robust space-based assets, more effective electronic attack systems, more resilient base infrastructure, and other assets essential for effective operations against future adversaries.

The second theme to emerge from QDR analyses is the importance of ensuring that U.S. forces are flexible and adaptable so that they can confront the full range of challenges that could emerge from a complex and dynamic security environment. Together, these insights helped inform the Department’s leaders as they made choices regarding the evolution of the force.

The remainder of this section provides an overview of initiatives emerging from the QDR. They are grouped according to the six mission areas listed above. As they reach fruition, these initiatives will accelerate the evolution of our Armed Forces toward a mix of activities and capabilities better suited to the demands of the emerging security environment. Even so, many of these steps should be regarded as down payments that will be followed by further reforms and rebalancing actions that will continue beyond the current FYDP.

Defend the United States and Support Civil Authorities at Home

The first responsibility of any government and its defense establishment is to protect the lives and safety of its people. Because the United States benefits from favorable geography and continental size, direct attacks against the country itself have been rare throughout our history. However, events since the terrorist attacks of September 11, 2001, remind us that the rapid proliferation of destructive technologies, combined with potent ideologies of violent extremism, portends a future in which all governments will have to maintain a high level of vigilance against terrorist threats. Moreover, state adversaries are acquiring new means to strike targets at greater distances from their borders and with greater lethality. Finally, the United States must also be prepared to respond to the full range of potential natural disasters.

The experiences of the past several years have deepened the realization that state- and non-state adversaries alike may seek to attack military and civilian targets within the United States. Protecting the nation and its people from such threats requires close synchronization between civilian and military efforts. Although many efforts to protect the United States are led by other federal agencies, including the Department of Homeland Security (DHS), the role of the Department of Defense in defending the nation against direct attack and in providing support to civil authorities, potentially in response to a very significant or even catastrophic event, has steadily gained prominence.

When responding to an event within the United States, the Department of Defense will almost always be in a supporting role. DoD can receive requests to provide federal assistance through two avenues: first, through DHS as the lead federal agency, or second, through a governor's request under U.S. Code Title 32 authorities.

To ensure that the Department of Defense is prepared to provide appropriate support to civil authorities, the QDR examined the sufficiency of the programmed force and sought to identify capability enhancements that were of highest priority for the future. Key initiatives resulting from this assessment include efforts to:

- *Field faster, more flexible consequence management response forces.* The Department has gained important experience and learned valuable lessons from its efforts to field specialized consequence management response forces for chemical, biological, radiological, nuclear, and high-yield explosives events (CBRNE). Given the potential for surprise attacks within the United States, the Department will begin reorganizing these forces to enhance their lifesaving capabilities, maximize their flexibility, and reduce their response times. First, the Department will begin restructuring the original CBRNE Consequence Management Response Force (CCMRF), to increase its ability to respond more rapidly to an event here at home. To address the potential for multiple, simultaneous disasters, the second and third CCMRFs will be replaced with smaller units focused on providing command and control and communications capabilities for Title 10 follow-on forces. Complementing the evolution of the first CCMRF, the Department also will draw on existing National Guard forces to build a Homeland Response Force (HRF) in each of the ten Federal Emergency Management Agency (FEMA) regions. These ten HRFs will provide a regional response capability; focus on planning, training and exercising; and forge strong links between the federal level and state and local authorities.
- *Enhance capabilities for domain awareness.* The Department of Defense and its interagency partners must be able to more comprehensively monitor the air, land, maritime, space, and cyber domains for potential direct threats to the United States. Such monitoring provides the U.S. homeland with an extended, layered in depth defense. This effort includes enhanced coordination with Canada for the defense of North America as well as assisting Mexico and Caribbean partners in developing air and maritime domain awareness capacities. Special attention is required to develop domain awareness tools for the Arctic approaches as well. In coordination with domestic and international partners, DoD will explore technologies that have the potential to detect, track, and identify threats in these spheres to ensure that capabilities can be deployed to counter them in a timely fashion. For example, the Department is working with DHS and the Defense Intelligence Agency (DIA) through a joint technology capability demonstration program to explore new technologies to assist in the detection of tunnels. This technology can support U.S.

authorities conducting domestic missions and also help meet the needs of forces operating overseas.

- *Accelerate the development of standoff radiological/nuclear detection capabilities.* DoD will improve its ability to detect radiological and nuclear material and weapons at a distance. Developing and fielding these sensors will make possible more effective wide-area surveillance in the maritime and air approaches to the United States, and will help address the challenge of locating and securing nuclear weapons and materials during overseas contingencies.
- *Enhance domestic counter-IED capabilities.* To better prepare the Department to support civil authorities seeking to counter potential threats from domestic improvised explosive devices (IEDs), DoD will assist civil authorities with counter-IED tactics, techniques, and procedures (TTPs) and capabilities developed in recent operations.

Succeed in Counterinsurgency, Stability, and Counterterrorism Operations

The wars we are fighting today and assessments of the future security environment together demand that the United States retain and enhance a whole-of-government capability to succeed in large-scale counterinsurgency (COIN), stability, and counterterrorism (CT) operations in environments ranging from densely populated urban areas and mega-cities, to remote mountains, deserts, jungles, and littoral regions. In some cases, it may be in the U.S. interest to help strengthen weak states, including those facing homegrown insurgencies and transnational terrorist and criminal networks or those that have been weakened by humanitarian disasters. Moreover, there are few cases in which the U.S. Armed Forces would engage in sustained large-scale combat operations without the associated need to assist in the transition to just and stable governance. Accordingly, the U.S. Armed Forces will continue to require capabilities to create a secure environment in fragile states in support of local authorities and, if necessary, to support civil authorities in providing essential government services, restoring emergency infrastructure, and supplying humanitarian relief.

In order to ensure that America's Armed Forces are prepared for these complex and taxing missions, it is vital that the lessons from today's conflicts be further institutionalized in military doctrine, training, capability development, and operational planning. Stability operations, large-scale counterinsurgency, and counterterrorism operations are not niche challenges or the responsibility of a single Military Department, but rather require a portfolio of capabilities as well as sufficient capacity from across America's Armed Forces and other departments and agencies. Nor are these types of operations a transitory or anomalous phenomenon in the security landscape. On the contrary, we must expect that for the indefinite future, violent extremist groups, with or without state sponsorship, will continue to foment instability and challenge U.S. and allied interests. Our enemies are adaptive and will develop systems and tactics that exploit

our vulnerabilities. For example, IEDs have been used effectively against U.S. and other counterinsurgency forces and have become the weapon of choice of some enemies. We must assume that the IED threat will evolve and persist even as better countermeasures are developed.

Since 2001, U.S. forces have become far more proficient in operations against insurgents and terrorist groups and in helping partners to provide security to populations threatened by such groups. U.S. forces will need to maintain a high level of competency in this mission area for decades to come. Accordingly, the Department is continuing to grow capabilities for critical counterinsurgency, stability, and counterterrorism operations in Iraq, Afghanistan, and elsewhere. To institutionalize the lessons learned over these years, DoD has made and will continue to make substantial changes to personnel management practices, professional military education and training programs, and career development pathways.

Operational innovation and adaptability have always been hallmarks of the American Soldier, Sailor, Airman, Marine, and Coast Guardsman. Our experience in Iraq and Afghanistan and elsewhere has tested our forces and they are again proving their mettle. The Department and supporting defense industry must continue to adapt, accommodating both longer timelines for operations and engagements, and shorter ones for fielding new tactics and capabilities against highly adaptive adversaries. They must be as responsive, flexible, and mission-focused as the forces they are supporting.

The QDR has placed special emphasis on ensuring that the men and women fighting today's conflicts have the tools and resources they need to succeed. Accordingly, The Secretary has directed that investments be increased in certain capabilities that have been in consistently in high demand and have proven to be key enablers of tactical and operational success. Successful COIN, stability, and CT operations are necessarily the products of strategies that orchestrate the activities of military and civilian agencies, as well as those of indigenous governments and partner states. Enhancements to the capabilities and capacity of the U.S. Armed Forces, then, are being pursued in the context of continued growth in the capabilities of other U.S. agencies and in the contributions of allied and partner governments.

Chief among these enhancements are the following:

- *Increase the availability of rotary-wing assets.* Vertical lift has been indispensable to successful counterinsurgency and counterterrorism operations in Iraq, Afghanistan, and elsewhere. As operations in the rugged terrain of Afghanistan grow



U.S. Army Spc. Justin Slagle returns to Forward Operating Base Lane in a UH-60 Black Hawk helicopter after an air assault mission in the Zabul province of Afghanistan, Oct. 15, 2009. U.S. Army photo by Spc. Tia P. Sokimson.

in scope and intensity, more rotary-wing lift capacity will be needed to ensure that coalition and Afghan forces can be transported and resupplied at remote outposts and effectively cover their areas of responsibility. Demand for these capabilities will remain high in the future as distributed U.S. forces conduct CT, COIN, and foreign internal defense operations elsewhere. Among other steps, the Army and U.S. Special Operations Command will add a company of upgraded cargo helicopters (MH-47G) to the Army's Special Operations Aviation Regiment. In addition, the general purpose forces will take steps, including the expansion of pilot training, to make selected vertical lift assets more readily accessible to forces in forward theaters of operations. The Navy, for example, will dedicate two helicopter squadrons for direct support to naval special warfare units. For its part, the Army will reorganize remaining separate Active Component formations to form an additional (12th) Active Component combat aviation brigade, and will create a 13th Active Component combat aviation brigade to help meet global demand for these assets.

- *Expand manned and unmanned aircraft systems (UASs) for intelligence, surveillance, and reconnaissance (ISR).* Long-dwell UASs, such as the Predator, Reaper, and other



U.S. Air Force Staff Sgt. Stephanie Hughes, an MQ-9 Reaper unmanned aerial vehicle weapons loader assigned to the 432nd Aircraft Maintenance Squadron, reviews loading procedures during weapons loading training at Creech Air Force Base, Nev., April 22, 2009. U.S. Air Force photo by Senior Airman Larry E. Reid Jr.

systems, have proven to be invaluable for monitoring activities in contested areas, enhancing situational awareness, protecting our forces, and assisting in targeting enemy fighters. In FY 2010, the Department made a commitment to grow to a capacity of 50 sustained orbits of Predator/Reaper by FY 2011. The Air Force is on track to achieve this goal and will continue to expand the force to 65 orbits by FY 2015. The Army is expanding all classes of UASs, including the accelerated production of the Predator-class Extended Range Multi-Purpose (ER/MP) UAS. The

Navy is introducing sea-based UASs. And DoD is exploring ways to enhance the effectiveness of its fleet of ISR aircraft by developing innovative sensor technologies, support infrastructures, and operating concepts.

- *Expand intelligence, analysis, and targeting capacity.* Forces in Iraq, Afghanistan, and elsewhere have developed new and more effective means for rapidly processing, exploiting, and fusing information from a wide array of sources and disseminating this information to

operators at the tactical level. We have also learned that information sharing with allied and partner forces can be critical to success. These approaches have yielded significant improvements in our ability to understand insurgent and terrorist networks and to target key elements. The Department is adding trained manpower and critical supporting systems, including communications architectures, to support these approaches and to match planned increases in collection capacity. The added capabilities will support both special operations forces and general purpose forces and will enhance the effectiveness and precision of counterinsurgency operations in Iraq and Afghanistan.

- Improve counter-IED capabilities.* The Department will continue to place great emphasis on defeating the evolving threat of IEDs. Doing so necessitates a multipronged approach that includes synchronizing counter-IED efforts Department wide, providing specialized training, attacking the networks that make and deploy IEDs, and defeating the devices themselves. Airborne electronic warfare (EW) assets in particular have been in high demand in Iraq and Afghanistan in the fight against IEDs and will be valuable in future conflict environments as well. In order to increase coverage over these battlefields, the Air Force will continue to field additional EW capabilities, which will include fielding one additional C-130 aircraft outfitted in the EW configuration; the Navy will procure additional E/A-18Gs; and the Marine Corps will extend the service lives of EA-6B EW aircraft. In addition, many of the enhancements listed previously, especially in ISR and intelligence analysis, will contribute to our forces' ability to counter IED networks.



U.S. Air Force crew chief Airman 1st Class Rabeem Crockett guides a mine-resistant ambush protected vehicle as it's loaded onto a C-17 Globemaster III in Iraq, Dec. 1, 2009. U.S. Air Force photo by Senior Airman Tony R. Ritter.

- Expand and modernize the AC-130 fleet.* AC-130 gunships have been invaluable in supporting operations against insurgent and terrorist groups in Iraq and Afghanistan. These units have therefore been in heavy demand even as a portion of the fleet approached the end of its service life. Beginning in FY 2012 the Air Force will convert 16 new C-130J aircraft to the gunship configuration; older model AC-130s will be retired. These changes will simultaneously modernize the fleet and enlarge it from 25 to a total of 33 aircraft.

- *Increase key enabling assets for SOF.* As the Department continues to expand special operations forces, the QDR recognized the need to invest in enabling capabilities commensurate with programmed growth. Special operations forces require general purpose enablers to meet increasing demand for special operations and to maximize their operational effectiveness. As noted above, the Department is replacing and modernizing the gunship inventory to provide close air support and force protection. Additionally, the Department is increasing the number of organic combat support and combat service support assets available to both Army and Naval special operations forces units. These assets include logisticians, communications assets, information support specialists, forensic analysts, and intelligence experts.
- *Increase COIN, stability operations, and CT competency and capacity in general purpose forces.* Our assessment of security trends points clearly to the conclusion that the future mix of missions facing U.S. forces will call for greater flexibility and agility to operate among diverse populations, with a wide range of partners, and in a variety of operating environments. By FY 2013 the Army will convert a heavy brigade combat team (BCT) to the Stryker configuration. As resources become available and future global demands become clearer, the Department may convert several more BCTs. Our assessment of the future operating environment also suggests that increasing capacity for maritime operations in coastal and riverine environments will be appropriate. Therefore, beginning in FY 2011, the Navy will add a fourth riverine squadron to its force structure and will invest in service life extension programs for its coastal patrol craft.
- *Expand civil affairs capacity.* Ineffective governance can create areas that terrorists and insurgents can exploit. Circumstances are ripe for violent ideologies to spread among a population when governments struggle to provide basic services, justice and security, or



U.S. Navy Lt. Rasha Hanna, a dental officer from Steubenville, Ohio, interacts with Iraqi children during a Female Civil Affairs Mission to a school in Abu Tiban, Iraq. U.S. Marine Corps photo by Gunnery Sgt. Kevin W. Williams.

the conditions for economic opportunity. Civil affairs forces address these threats by serving as the vanguard of DoD's support to U.S. government efforts to assist partner governments in the fields of rule of law, economic stability, governance, public health and welfare, infrastructure, and public education and information. Because of their linguistic and

cultural skills, civil affairs personnel often serve as liaisons to reduce friction between our military forces and the civilian population. Operations in Iraq and Afghanistan have placed high demands on existing civil affairs forces, which were heavily concentrated in the Reserve Component. The Department has begun to readjust that balance. The FY 2010 budget invested in the first active duty civil affairs brigade to support general purpose forces. The Army will continue to increase civil affairs capacity organic to USSOCOM. The Department is also exploring ways to better integrate civil affairs functions with complementary stability operations activities, such as those of Provincial Reconstruction Teams and Human Terrain Teams deployed in Iraq and Afghanistan.

- *Increase regional expertise for Afghanistan and Pakistan.* The Chairman of the Joint Chiefs of Staff recently launched an initiative to develop and deploy a cadre of regionally aligned experts proficient in COIN doctrine and relevant language skills, and also culturally attuned to the Afghanistan-Pakistan region. These skills are essential to effective intelligence gathering, engagement, and communication, and hence are central to the success of our overall strategy. Language training is the cornerstone of this program and by January 2010, several hundred students will have received language instruction in Dari and Pashto. These numbers will continue to grow. To gain maximum value from the Department's investment in training this cadre of military and civilian personnel, participants will rotate between U.S.- and theater-based key staff and leadership positions to provide necessary expertise in support of U.S. operations in the region.
- *Strengthen key supporting capabilities for strategic communication.* As part of the U.S. government's integrated civilian-military efforts to interact effectively with a variety of audiences and stakeholders, DoD will continue to improve key capabilities that support strategic communication. Effective strategic communication requires close collaboration across interagency lines at all stages, and DoD works particularly closely with the Department of State to support State's core role in communicating with foreign governments and international publics. Effective strategic communication also requires the orchestration of multiple lines of operation. Chief among these are policy implementation, force employment, information operations, public affairs, civil affairs, and public diplomacy and engagement. Together, the effects of these activities support national objectives. Strategic communication is particularly essential in COIN, CT, and stability operations, where population and stakeholder beliefs and perceptions are crucial to our success, and where adversaries often enjoy the advantage of greater local knowledge and calibrate their activities to achieve sophisticated information objectives. Elsewhere in this report, we have noted a number of current Department initiatives to improve language and cultural capabilities and to increase educational and training programs that prepare our people to work in and among foreign populations. We see these efforts as

among the Department's most important investments in support of effective strategic communication.

The President's forthcoming report to Congress on U.S. government strategic communication will outline a common vision of interagency collaboration in this area and define the Administration's position on this issue. On the basis of this review and the Department's own comprehensive internal assessment, we may pursue additional DoD investments in our FY 2012 budget. For example, we will examine capabilities to better access and produce knowledge on complex social communication systems and on the perceptions, attitudes, and beliefs of populations and stakeholders. We will also assess our current understanding of the direct and indirect effects of potential actions and signals on perceptions, attitudes and beliefs, and we will formulate and deliver timely and culturally attuned messages to selected populations. Finally, we will ensure that we can shape and coordinate the activities of our forces in support of our overall strategy to influence selected populations.

In addition to bolstering the Armed Forces' ability to conduct COIN, stability, and CT operations, these investments will improve capacity for peacekeeping operations. These investments will also facilitate unconventional warfare operations or conventional military operations against state or non-state adversaries.

Build the Security Capacity of Partner States

Since the United States assumed the role of a leading security provider after the end of World War II, DoD has worked actively to build the defense capacity of allied and partner states. Doing so has also given the U.S. Armed Forces opportunities to train with and learn from their counterparts. These efforts further the U.S. objective of securing a peaceful and cooperative international order. Security cooperation activities include bilateral and multilateral training and exercises, foreign military sales (FMS) and financing (FMF), officer exchange programs, educational opportunities at professional military schools, technical exchanges, and efforts to assist foreign security forces in building competency and capacity. In today's complex and interdependent security environment, these dimensions of the U.S. defense strategy have never been more important. U.S. forces, therefore, will continue to treat the building of partners' security capacity as an increasingly important mission.

Within the range of security cooperation activities, the most dynamic in the coming years will be security force assistance (SFA) missions: "hands on" efforts, conducted primarily in host countries, to train, equip, advise, and assist those countries' forces in becoming more proficient at providing security to their populations and protecting their resources and territories. In order to ensure that improvements in partner security forces are sustained, the Department must seek to

enhance the capabilities and capacity of security institutions, such as defense ministries, that support fielded forces.

As we place greater emphasis on building the capacity of our partners, our efforts will continue to be informed by our long-term determination to foster human dignity. This commitment is manifested in human rights vetting and other controls that shape our efforts to train, equip, advise, and assist foreign forces and partner security institutions. America's efforts to build the capacity of our partners will always be defined by support for healthy civil-military relations, respect for human dignity and the rule of law, promotion of international humanitarian law, and the professionalization of partner military forces.

These SFA activities can help enable host-country participation in coalition stability operations and multilateral peacekeeping operations that improve regional security. Working in conjunction with other U.S. government agencies and allied military forces to strengthen the security institutions of partner nations will be a crucial part of U.S. and allied efforts to defeat terrorist groups around the world.

Terrorist groups seek to evade security forces by exploiting ungoverned and undergoverned areas as safe havens from which to recruit, indoctrinate, and train fighters, as well as to plan attacks on U.S. and allied interests. Where appropriate, U.S. forces will work with the military forces of partner nations to strengthen their capacity for internal security, and will coordinate those activities with those of other U.S. government agencies as they work to strengthen civilian capacities, thus denying terrorists and insurgents safe havens. For reasons of political legitimacy as well as sheer economic necessity, there is no substitute for professional, motivated local security forces protecting populations threatened by insurgents and terrorists in their midst.

U.S. forces have been training, advising, and assisting Afghan and Iraqi security forces so that they can more effectively uphold the rule of law and control and defend their territories against violent non-state actors. In these contested environments, partnered COIN, in which Afghan and Iraqi units operate in tandem with U.S. forces, is an effective way to train and advise forces while conducting combat operations against insurgents. These partnered host-nation units have



Capt. Commander Laurentiu Chirita, left, with the Romanian Ministry of Defense, receives a preflight briefing from U.S. Air Force Lt. Col. Scott Bridgers, the safety officer of the 169th Fighter Wing, South Carolina Air National Guard, before an orientation flight at the McEntire Joint National Guard Base (JNGB), S.C. Aug. 18, 2008. U.S. Air Force photo by Senior Master Sgt. Edward E. Snyder

the advantage of knowing the terrain, language, and local culture. Partnering with U.S. forces in return allows them to train and learn by doing.

Efforts that use smaller numbers of U.S. forces and emphasize host-nation leadership are generally preferable to large-scale counterinsurgency campaigns. By emphasizing host-nation leadership and employing modest numbers of U.S. forces, the United States can sometimes obviate the need for larger-scale counterinsurgency campaigns. For example, since 2002 U.S. forces have trained and advised elements of the Philippine armed forces working to secure areas of the southern Philippines that had been a haven for the Abu Sayyaf terrorist organization and other terrorist elements. Over the past eight years, U.S. forces and their Philippine counterparts have trained together and worked to understand the organization and modus operandi of the adversary. As their equipment and skills have improved, Philippine forces have patrolled more widely and more frequently, bringing security to previously contested areas.

This model is being applied elsewhere to good effect. U.S. forces are working in the Horn of Africa, the Sahel, Colombia, and elsewhere to provide training, equipment, and advice to their host-country counterparts on how to better seek out and dismantle terrorist and insurgent networks while providing security to populations that have been intimidated by violent elements in their midst. For example, over the past ten years, U.S. advisors have helped Colombia to enhance its land, air, and maritime capabilities and improve the professionalism of its security forces. The results of these efforts, when combined with U.S. economic and governance assistance, have included the demobilization of some 50,000 members of illegal armed groups and a dramatic reduction in terrorist incidents since 2002. Around the world, the United States Coast Guard also deploys international training teams to partner nations, providing technical training and consulting services in maritime law enforcement, marine safety and environmental protection, small boat operations and maintenance, search and rescue, port security, and infrastructure development.

Many governments facing active or latent threats from violent extremist groups would welcome tailored advisory assistance from the United States. As U.S. forces draw down in Iraq and make progress toward building stability in Afghanistan, more capacity will be available for training, advising, and assisting foreign security forces in other parts of the globe. In some countries, the United States will provide this training directly. In others, it will facilitate cooperation among regional partners and international organizations. Although special operations forces will be able to meet some of this demand, especially in politically sensitive situations, U.S. general purpose forces will need to be engaged in these efforts as well. The deploying units will require specialized training and preparation for these operations.

Key QDR initiatives to support this mission area include the following:

- Strengthen and institutionalize general purpose force capabilities for security force assistance.* All four Services provide specialized training to individuals and groups deploying abroad to train and advise the security forces of partner nations. In anticipation of the growing role of security force assistance in U.S. defense strategy and operations, the Army, Navy, Air Force, and Marine Corps will add more than 500 personnel to their train-the-trainer units for general purpose forces. The Air Force will also expand its regionally oriented contingency response groups (CRGs). The intention is for these units to steadily grow to the point at which their staffs can sustain specialized expertise in regions and countries of greatest importance and regularly detach experts to accompany units deploying to training missions abroad. In addition, the Air Force will field light mobility and light attack aircraft in general purpose force units in order to increase their ability to work effectively with a wider range of partner air forces. Finally, the investments in airborne ISR and in green and brown water maritime capacity described above will also contribute to U.S. capacity for security force assistance missions.
- Enhance linguistic, regional, and cultural ability.* Operating in partnership with host-nation security forces and among local populations puts a premium on foreign language skills and regional and cultural knowledge. Today's operating environment demands a much greater degree of language and regional expertise requiring years, not weeks, of training and education, as well as a greater understanding of the factors that drive social change. For these reasons, the Department is investing \$33 million in expanded language training centers to fund ten language training detachments to support general purpose forces in ongoing operations. The Department is also adding \$14 million for language, regional expertise, and culture training for special operations forces. Beginning in FY 2011, the Defense Language Institute Foreign Language Center will increase the capacity of its Foreign Language Immersion Program. The Department will continue to adapt existing language programs and policies, and, through such programs as the Minerva Initiative, to develop the intellectual capital necessary to meet the challenges of operating in a changing and complex environment. The Department will also continue to refine its processes



U.S. Marine Corps 1st Lt. Patrick Kelly (left), with India Company, 3rd Battalion, 4th Marine Regiment, uses an interpreter to speak with Afghan men during a patrol through the village of Sabtut, Afghanistan, on Dec. 25, 2009. DoD photo by Lance Cpl. Chad J. Pulliam, U.S. Marine Corps.

for generating requirements, managing existing resources, providing strategic direction and setting priorities, and resourcing language and regional expertise needs. As forces draw down from Iraq and, later, Afghanistan, the Military Departments will regionally align some portion of their general purpose forces, including those conducting security force assistance, to take advantage of investments in foreign language training and regional knowledge.

- *Strengthen and expand capabilities for training partner aviation forces.* Today, the Department meets only half of the current demand for training partner aviation forces. In order to address this persistent shortfall, starting in FY 2012, DoD will double its current capacity to provide such training. This enhancement will include the purchase of light, fixed-wing aircraft to enable the Air Force's 6th Special Operations Squadron to engage partner nations for whose air forces such aircraft might be appropriate. Also in FY 2012, two non-U.S. helicopters will be acquired to support the unit's activities. Providing training to partner aviation forces is an area that QDR analysis suggests will continue to grow. Toward that end, the Department will also seek authorities and resources to enable the Army to sustain and expand its ability to train partner forces to operate and maintain helicopters used by partner states.
- *Strengthen capacities for ministerial-level training.* As noted above, the Department recognizes that in order to ensure that enhancements developed among security forces are sustained, the supporting institutions in partner nations must also function effectively. This ministerial training mission is being conducted in Iraq and Afghanistan today by military officers, contractors, and members of the Department's Civilian Expeditionary Workforce (CEW). In FY 2010, the Department launched two formal programs, the Defense Institution Reform Initiative (DIRI) and the Ministry of Defense Advisor (MODA) program, to strengthen U.S. defense reform efforts in key countries and improve the preparation of DoD civilian advisors for such missions. The Department anticipates that the CEW, DIRI, and MODA programs will continue to develop and expand in support of both whole-of-government approaches and broad U.S. government objectives in reforming the security sector.
- *Create mechanisms to facilitate more rapid transfer of critical materiel.* SFA missions in recent years have repeatedly encountered delays in transferring critical end items to partner state forces that were ready to employ them. The Department is exploring options for expediting the acquisition and transfer of critical capabilities to partner forces.
- *Strengthen capacities for training regional and international security organizations.* The Department will improve its capacity for enabling the United Nations and other multinational peacekeeping efforts, from the training and equipping of soldiers and police

in their home countries to their deployment/employment and sustainment as peacekeepers. In addition to undertaking bilateral activities designed to boost contributing nation capacity, the Department will work to enhance the capacity of United Nations and regional organizations' peacekeeping field operations.

Deter and Defeat Aggression in Anti-Access Environments

U.S. forces must be able to deter, defend against, and defeat aggression by potentially hostile nation-states. This capability is fundamental to the nation's ability to protect its interests and to provide security in key regions. Anti-access strategies seek to deny outside countries the ability to project power into a region, thereby allowing aggression or other destabilizing actions to be conducted by the anti-access power. Without dominant U.S. capabilities to project power, the integrity of U.S. alliances and security partnerships could be called into question, reducing U.S. security and influence and increasing the possibility of conflict.

In the future, U.S. forces conducting power projection operations abroad will face myriad challenges. States with the means to do so are acquiring a wide range of sophisticated weapons and supporting capabilities that, in combination, can support anti-access strategies aimed at impeding the deployment of U.S. forces to the theater and blunting the operations of those forces that do deploy forward.

North Korea and Iran, as part of their defiance of international norms, are actively testing and fielding new ballistic missile systems. Many of these systems are more accurate and have greater ranges than the Scud-class missiles used by Iraq in the 1991 Gulf War. As the inventories and capabilities of such systems continue to grow, U.S. forces deployed forward will no longer enjoy the relative sanctuary that they have had in conflicts since the end of the Cold War. Air bases, ports of debarkation, logistics hubs, command centers, and other assets essential to high-tempo military operations could be at risk.

As part of its long-term, comprehensive military modernization, China is developing and fielding large numbers of advanced medium-range ballistic and cruise missiles, new attack submarines equipped with advanced weapons, increasingly capable long-range air defense systems, electronic warfare and computer network attack capabilities, advanced fighter aircraft, and counter-space systems. China has shared only limited information about the pace, scope, and ultimate aims of its military modernization programs, raising a number of legitimate questions regarding its long-term intentions.

U.S. power projection forces also confront growing threats in other domains. In recent years, a number of states have acquired sophisticated anti-ship cruise missiles, quiet submarines, advanced mines, and other systems that threaten naval operations. In addition to these weapons, Iran has

fielded large numbers of small, fast attack craft designed to support “swarming” tactics that seek to overwhelm the layers of defenses deployed by U.S. and other nations’ naval vessels.

U.S. air forces in future conflicts will encounter integrated air defenses of far greater sophistication and lethality than those fielded by adversaries of the 1990s. Proliferation of modern surface-to-air missile systems by Russia and others will pose growing challenges for U.S. military operations worldwide. Several states have the capability to disrupt or destroy satellites that provide surveillance, communications, positioning, and other functions important to military operations. And non-state actors such as Hezbollah have acquired unmanned aerial vehicles and man-portable air defense systems from Iran.



The Missile Defense Agency is examining the utility of airborne infrared sensors mounted on unmanned aerial vehicles to detect and track ballistic missiles.

Because of their extreme lethality and long-term effects, nuclear weapons are a source of special concern, both for the United States and for its allies and partners in regions where adversary states possess or seek such weapons. If regional adversaries succeed in fielding even small arsenals of nuclear weapons, the security dynamics of key regions could be severely complicated. Even as we strive to prevent proliferation, we must take steps to hedge against its possibility. Accordingly, DoD will continue to enhance U.S. capabilities for deterring and preventing

the use of nuclear weapons and their means of delivery. In addition, the United States, its allies, and its partners will undertake consultations on policies and postures to prevent proliferation and credibly deter aggression.

DoD is taking steps to ensure that future U.S. forces remain capable of protecting the nation and its allies in the face of this dynamic threat environment. In addition to ongoing modernization efforts, this QDR has directed the following further enhancements to U.S. forces and capabilities:³

- ***Develop a joint air-sea battle concept.*** The Air Force and Navy together are developing a new joint air-sea battle concept for defeating adversaries across the range of military operations, including adversaries equipped with sophisticated anti-access and area denial capabilities. The concept will address how air and naval forces will integrate capabilities across all operational domains—air, sea, land, space, and cyberspace—to counter growing

³ The Nuclear, Space, and Ballistic Missile Defense reviews have developed additional initiatives to enhance capabilities relevant to meeting these challenges. Those initiatives are described in these respective reports.

challenges to U.S. freedom of action. As it matures, the concept will also help guide the development of future capabilities needed for effective power projection operations.

- *Expand future long-range strike capabilities.* Enhanced long-range strike capabilities are one means of countering growing threats to forward-deployed forces and bases and ensuring U.S. power projection capabilities. Building on insights developed during the QDR, the Secretary of Defense has ordered a follow-on study to determine what combination of joint persistent surveillance, electronic warfare, and precision-attack capabilities, including both penetrating platforms and stand-off weapons, will best support U.S. power projection operations over the next two to three decades. Findings from that study will inform decisions that shape the FY 2012-17 defense program. A number of related efforts are underway. The Navy is investigating options for expanding the capacity of future Virginia-class attack submarines for long-range strike. It is also slated to conduct field experiments with prototype versions of a naval unmanned combat aerial system (N-UCAS). The N-UCAS offers the potential to greatly increase the range of ISR and strike operations from the Navy's carrier fleet. The Air Force is reviewing options for fielding survivable, long-range surveillance and strike aircraft as part of a comprehensive, phased plan to modernize the bomber force. The Navy and the Air Force are cooperatively assessing alternatives for a new joint cruise missile. The Department also plans to experiment with conventional prompt global strike prototypes.
- *Exploit advantages in subsurface operations.* The Navy is increasing funding for the development of an unmanned underwater vehicle that will be capable of a wide range of tasks.
- *Increase the resiliency of U.S. forward posture and base infrastructure.* In key regions, U.S. forces will need to have access to networks of bases and supporting infrastructures that are more resilient than today's in the face of attacks by a variety of means. The Department is studying options to increase the resiliency of bases in selected theaters and will consult with allies and fund these as promising initiatives are identified through analysis. Appropriate steps will vary by region but will generally involve combinations of measures, including hardening key facilities against attack, redundancy and dispersal concepts, counterintelligence, and active defenses, complemented by long-range platforms for ISR and strike operations.
- *Assure access to space and the use of space assets.* The Department, through the implementation of priorities from the Space Posture Review, will explore opportunities to leverage growing international and commercial expertise to enhance U.S. capabilities and reduce the vulnerability of space systems and their supporting ground infrastructure. The Department will broaden and deepen relationships with other nations and private firms to

create mutually beneficial partnerships to share capabilities, systems, technology, and personnel, while ensuring that we also protect sensitive sources and methods. Working both bilaterally and multilaterally, the Department will promote spaceflight safety. Air Force investments in space situational awareness will support U.S. efforts by enhancing the ability to attribute actions in space and gain greater understanding of events in space. Ongoing implementation of the 2008 Space Protection Strategy will reduce vulnerabilities of space systems, and fielding capabilities for rapid augmentation and reconstitution of space capabilities will enhance the overall resiliency of space architectures.

- *Enhance the robustness of key C4ISR capabilities.* In concert with improving the survivability of space systems and infrastructure, U.S. forces will require more robust and capable airborne and surface-based systems to provide critical wartime support functions. In particular, airborne ISR assets must be made more survivable in order to support operations in heavily defended airspace. The Department is also exploring options for expanding jam-resistant satellite communications and for augmenting these links with long-endurance aerial vehicles that can serve as airborne communications relay platforms.
- *Defeat enemy sensor and engagement systems.* In order to counter the spread of advanced surveillance, air defense, and strike systems, the Department has directed increased investments in selected capabilities for electronic attack.
- *Enhance the presence and responsiveness of U.S. forces abroad.* In consultation with allies, the Department is examining options for deploying and sustaining selected forces in regions facing new challenges. For example, selectively homeporting additional naval forces forward could be a cost-effective means to strengthen deterrence and expand opportunities for maritime security cooperation with partner navies. The Department will conduct regional and global reviews of U.S. defense posture to identify key posture priorities that require consultation with allies and constituents.

Prevent Proliferation and Counter Weapons of Mass Destruction

The proliferation of nuclear, chemical, biological, and radiological capabilities among state and non-state actors can threaten our ability to defend U.S. and allied interests, promote peace and security, ensure regional stability, and protect our citizens. Further, the use of a nuclear weapon or a biological attack would have global ramifications. Preventing the proliferation and use of such weapons is therefore a top national priority for which many federal agencies have important responsibilities. As the ability to create and employ weapons of mass destruction spreads globally, so must our combined efforts to detect, interdict, and contain the effects of these weapons. Deterrence of such threats and defense against them can be enhanced through measures aimed at better understanding potential threats, securing and reducing dangerous materials wherever

possible, monitoring and tracking lethal agents and materials and their means of delivery, and, where relevant, defeating the agents themselves.

For these reasons, the Department will expand capabilities to counter WMD threats, strengthen interdiction operations, refocus intelligence requirements, enhance and extend international partnerships to thwart proliferation, and support cooperative threat reduction efforts, such as the



Members of a joint U.S. and Australian navy boarding team conduct a security sweep aboard USNS Walter S. Diehl (T-AO 193), Oct. 29, 2009, during a boarding exercise in the South China Sea as part of the Proliferation Security Initiative (PSI) exercise Deep Sabre II. DoD photo by Communication Spc. 2nd Class Seth Clarke, U.S. Navy.

Administration's new international initiative to secure all vulnerable nuclear material worldwide. In addition, to deter adversaries considering the use of chemical or biological weapons, the Department will enhance efforts to develop countermeasures, defenses, and mitigation strategies.

Further, the Department must prepare to contain WMD threats emanating from fragile states and ungoverned spaces. Success in this area will hinge on the ability to prevent and respond to global WMD crises, such as situations in which responsible state control of nuclear, chemical, or biological materials is not guaranteed. Faced with such emergencies, the Department will require the ability to locate and secure WMD and WMD-related components, as well as interdict them on land, on sea, or in the air.

Geographic containment of areas of concern will be necessary to ensure that WMD and related materials do not fall into the hands of hostile actors—a concept of operations that will involve U.S. forces, interagency capabilities, and the cooperation of regional powers and coalition forces. Effectively responding to WMD-armed threats will require an integrated, layered defense network in multiple geographic environments. This could include areas inside the state of concern, along the state's borders, in global transshipment lanes, in the approaches to the United States, and in the United States itself. Such an integrated, layered defense is essential to preventing an attack before it occurs, as well as responding to an attack should prevention fail. In addition, these preparations can help deny state and non-state adversaries the benefits they seek through actual or threatened use of WMD by raising the costs and risks of such an attack.

Through the QDR, the Secretary of Defense has directed that the following initiatives be undertaken:

- *Establish a standing Joint Task Force Elimination Headquarters.* In order to better plan, train, and execute WMD-elimination operations, the Department is establishing a standing Joint Task Force Elimination Headquarters with increased nuclear disablement, exploitation, intelligence, and coordination capabilities.
- *Research countermeasures and defenses to non-traditional agents.* The globalization of the world's chemical industry, coupled with scientific breakthroughs, increases the possibility of non-traditional chemical agents being used against U.S. and allied forces. The Department, with interagency partners, is increasing the resources for research and development of technologies to meet and defeat these emerging threats.
- *Enhance nuclear forensics.* Improving our ability to attribute nuclear threats to their source can help deter aggressors from considering the use of nuclear weapons, as well as deter state and non-state actors that may provide direct or indirect support of nuclear terrorism and prevent follow-on attacks through more rapid identification and apprehension of an attacker. Research is underway to identify new means by which we can arrive more quickly at reliable technical nuclear forensic assessments. Improving the ability to determine the source of material used in a nuclear attack will strengthen deterrence. Additional resources will enhance DoD's air and ground sample collection mission as well as augmenting current laboratory assessment capabilities. In this regard, the Department is examining new platforms for conducting nuclear/radiological air and ground sampling.
- *Secure vulnerable nuclear materials.* Preventing a radiological or nuclear attack by a terrorist organization begins by ensuring the security of all weapons-usable material at the source and promoting stringent nuclear security practices for both civilian and defense facilities across the globe. In support of the President's Global Lockdown Initiative, DoD is working with interagency partners to identify countries that could benefit from site upgrades, security training facilities, and the disposition of weapons-grade materials.
- *Expand the biological threat reduction program.* Countries that have the infrastructure and capability to report and track the spread of an outbreak of disease are able to save more lives. Detecting, diagnosing, and determining the origin of a pathogen will enable U.S. authorities to better respond to future disease outbreaks and identify whether they are natural or man-made. Accordingly, we are expanding the biological threat reduction program to countries outside the former Soviet Union in order to create a global network for surveillance and response.

- *Develop new verification technologies.* In order to support a robust arms control, nonproliferation, and counterproliferation agenda, new technologies for verification and monitoring will be necessary to ensure full compliance from all parties. DoD is developing new initiatives to build the specialized technological solutions needed to support these efforts.

Operate Effectively in Cyberspace

Our assessments of conflict scenarios involving state adversaries pointed to the need for improved capabilities to counter threats in cyberspace—a global domain within the information environment that encompasses the interdependent networks of information technology infrastructures, including the Internet and telecommunication networks. Although it is a man-made domain, cyberspace is now as relevant a domain for DoD activities as the naturally occurring domains of land, sea, air, and space.⁴ There is no exaggerating our dependence on DoD’s information networks for command and control of our forces, the intelligence and logistics on which they depend, and the weapons technologies we develop and field. In the 21st century, modern armed forces simply cannot conduct high-tempo, effective operations without resilient, reliable information and communication networks and assured access to cyberspace.

It is therefore not surprising that DoD’s information networks have become targets for adversaries who seek to blunt U.S. military operations. Indeed, these networks are infiltrated daily by a myriad of sources, ranging from small groups of individuals to some of the largest countries in the world. For example, criminals may try to access DoD’s healthcare systems in order to obtain personal information to perpetrate identity theft. Terrorists may seek to disrupt military networks and systems to cause chaos and economic damage. Foreign intelligence or military services may attempt to alter data in DoD databases to hinder our military’s ability to operate effectively. DoD must actively defend its networks.

This is no small task. DoD currently operates more than 15,000 different computer networks across 4,000 military installations around the world. On any given day, there are as many as seven million DoD computers and telecommunications tools in use in 88 countries using thousands of warfighting and support applications. The number of potential vulnerabilities, therefore, is staggering. Moreover, the speed of cyber attacks and the anonymity of cyberspace greatly favor the offense. This advantage is growing as hacker tools become cheaper and easier to employ by adversaries whose skills are growing in sophistication.

⁴ The man-made nature of cyberspace distinguishes it from other domains in which the U.S. armed forces operate. The Administration will continue to explore the implications of cyberspace’s unique attributes for policies regarding operations within it.

We must therefore be constantly vigilant and prepared to react nearly instantaneously if we are to effectively limit the damage that the most sophisticated types of attacks can inflict. In this environment, the need to develop strategies, policies, authorities, and capabilities for DoD to manage and defend its information networks is manifest.

DoD is taking a number of steps to strengthen its capabilities in the cyberspace:

- *Develop a comprehensive approach to DoD operations in cyberspace.* A Department-wide comprehensive approach will help build an environment in which cyber security and the ability to operate effectively in cyberspace are viewed as priorities for DoD. Strategies and policies to improve cyber defense in depth, resiliency of networks, and surety of data and communication will allow DoD to continue to have confidence in its cyberspace operations. A central component of this approach is cultural and organizational: The Department will adapt and improve operational planning, its networks, its organizational structures, and its relationships with interagency, industry, and international partners. New operational concepts, such as dynamic network defense operations, could enhance effectiveness by enabling more rapid actions and more comprehensive actions to protect DoD's networks.
- *Develop greater cyberspace expertise and awareness.* The Department will redouble its efforts to imbue its personnel with a greater appreciation for the threats and vulnerabilities in the cyber domain and to give them the skills to counter those threats and reduce those vulnerabilities at the user and system administrator levels. DoD can no longer afford to have users think of its information technologies and networks as simply the benign infrastructure that facilitates their work. Users and managers must be held accountable for ensuring network security and for implementing best practices. DoD is also growing its cadre of cyber experts to protect and defend its information networks and is investing in and developing the latest technologies to enable our forces to operate in cyberspace under a wide range of conditions, including in contested and degraded environments.
- *Centralize command of cyberspace operations.* In an effort to organize and standardize cyber practices and operations more effectively, the Department is standing up U.S. Cyber Command (USCYBERCOM), a subunified command under U.S. Strategic Command, to lead, integrate and better coordinate the day-to-day defense, protection, and operation of DoD networks. USCYBERCOM will direct the operation and defense of DoD's information networks, and will prepare to, and when directed, conduct full spectrum cyberspace military operations. An operational USCYBERCOM will also play a leading role in helping to integrate cyber operations into operational and contingency planning. In addition, DoD is training cyber experts, equipped with the latest technologies, to protect and defend its information networks. Essential to the success of this new approach

will be the capabilities and growth of the Service components that are stood up to support USCYBERCOM.

- *Enhance partnerships with other agencies and governments.* Freedom of operation in cyberspace is important and DoD must have the capabilities to defend its own networks. However, the interdependence of cyberspace means DoD networks are heavily dependent on commercial infrastructure. Just as it does in conducting many of our missions, DoD needs to collaborate with other U.S. departments and agencies and international partners both to support their efforts and to ensure our ability to operate in cyberspace. This mutual assistance includes information sharing, support for law enforcement, defense support to civil authorities, and homeland defense. In particular, DoD will strengthen its cooperation with DHS, which leads the national effort to protect federal information systems.

Guiding the Evolution of the Force

In combination and over time, the QDR initiatives described above will significantly enhance the ability of U.S. forces to protect and advance U.S. interests in both the near-and longer-term future. In addition to better preparing our own forces for the future, these initiatives will improve the Department's ability to build the capability and capacity of partners. Changes directed under the QDR can be broadly characterized by the following trends:

- U.S. ground forces will remain capable of full-spectrum operations, with continued focus on capabilities to conduct effective and sustained counterinsurgency, stability, and counterterrorist operations alone and in concert with partners.
- U.S. naval forces likewise will continue to be capable of robust forward presence and power projection operations, even as they add capabilities and capacity for working with a wide range of partner navies. The rapid growth in sea- and land-based ballistic missile defense capabilities will help meet the needs of combatant commanders and allies in several regions.
- U.S. air forces will become more survivable as large numbers of fifth-generation fighters join the force. Land-based and carrier-based aircraft will need greater average range,



The F-35 Lightning II will provide the Air Force, Navy, USMC, and U.S. allies and partners with highly-advanced, multirole, fifth generation capabilities. Photo courtesy of the Joint Strike Fighter Program.

flexibility and multimission versatility in order to deter and defeat adversaries that are fielding more potent anti-access capabilities. We will also enhance our air forces' contributions to security force assistance operations by fielding within our broader inventory aircraft that are well-suited to training and advising partner air forces.

- The United States will continue to increase the capacity of its special operations forces and will enhance their capabilities through the growth of organic enablers and key support assets in the general purpose forces.
- The capabilities, flexibility, and robustness of U.S. forces across the board will be improved by fielding more and better enabling systems, including ISR, electronic attack, communications networks, more resilient base infrastructure, and enhanced cyber defenses.

Our assessment of ongoing and potential future military operations identified a significant number of possible shortfalls in the capabilities or capacity of programmed U.S. forces. In some cases, opportunities exist to remedy these shortfalls by investing in new systems or additional force structure. In other cases, no readily available solutions are at hand but greater investments in research and development or concept exploration are warranted. Of course, many of these enhancements will be costly. Some of the tradeoffs that DoD's leaders have identified to enable the rebalancing of U.S. military capabilities are described below. More such tradeoffs could be necessary in the future.

Early in the QDR and in the course of the process of completing DoD's budget submission for FY 2010, the Secretary took action to direct resources away from lower-priority programs and activities so that more pressing needs could be addressed, both within that budget and in the years that follow it. Those decisions included ending production of the F-22 fighter, restructuring the procurement of the DDG-1000 destroyer and the Army's Future Combat Systems programs, deferring production of new maritime prepositioning ships, and stretching out the procurement of a new class of aircraft carrier. The Air Force is substantially reducing its fleet of older fourth-generation fighter aircraft.

In addition to these steps, DoD is proposing in its budget submission for FY 2011 to conclude production of the C-17 airlift aircraft, having completed the planned procurement of those aircraft. DoD has also decided to delay the command ship replacement (LCC) program and to extend the life of existing command ships, cancel the CG(X) cruiser, and terminate the Net Enabled Command and Control program. Those actions, among others, have enabled the Department to redirect resources into the high-priority areas outlined above.

Where it has not been possible to set in motion initiatives to meet certain future operational needs, the Secretary has identified vectors for the evolution of the force, calling on DoD

components to devote sustained efforts toward developing new concepts and capabilities to address those needs. Assessments of future operating environments will continue, with an eye toward refining our understanding of future needs. At the same time, the Department will continue to look assiduously for savings in underperforming programs and activities, divestiture, technology substitution, less-pressing mission and program areas, and other accounts so that more resources can be devoted to filling these gaps.

In some capability areas, meeting emerging challenges will call for the development of wholly new concepts of operation. Confronting sophisticated anti-access challenges and threats posed by nuclear-armed regional adversaries will pose particularly difficult problems. In recognition of the dynamism of the threat environment and advances in unmanned technologies, the Department will be examining future operational needs in several capability areas, including ISR, fighters and long-range strike aircraft, joint forcible entry, and information networks and communications. Assessments of programmed forces in these areas will center on iterative, interactive war games, in which force planners, operators, and technical experts can explore alternative strategies and operational concepts in an environment that tests forces against an intelligent, adaptive adversary. Insights gained from these efforts will inform future investments in research and development and, over time, will help decision makers to further rebalance future forces.

Sizing and Shaping the Force

The considerations outlined above relate to the capabilities that U.S. forces will need in order to accomplish their missions now and in the future. Force planning also requires that decisions be made about the aggregate capacity of the force: that is, how many operations should the force be able to accomplish simultaneously if called upon, and what types of operations could be necessary? This force-sizing and force-shaping construct is a key part of defense strategy that provides a yardstick by which to gauge the sufficiency of current and future forces. It is informed by the needs of the nation, assessments of threats and challenges that could confront the United States and its allies, the operational and force management requirements of the force, and a sense of the overall level of resources that may be available and appropriate for the defense of the nation and its interests. It is derived from the defense objectives articulated earlier in this report:

- Prevail in today's wars;
- Prevent and deter conflict;
- Prepare to defeat adversaries and succeed in a wide range of contingencies; and
- Preserve and enhance the force.

Given the current and projected security environment, our Armed Forces must, in aggregate, be capable of conducting a broad range of several overlapping operations to prevent and deter

conflict and, if necessary, to defend the United States, its allies and partners, selected critical infrastructure, and other national interests. This includes the potential requirement to conduct multiple concurrent operations, including large-scale combat operations, in disparate theaters. Any lesser capability would present the risk that the nation might be unable to defend important interests while its forces were undertaking a single large-scale operation. Such a possibility would increase the risk of aggression by other potential adversaries.

Largely for this reason, past defense reviews have called for the nation's armed forces to be able to fight and win two major regional conflicts in overlapping time frames. These have been characterized as conflicts against state adversaries, typically employing conventional military forces. This QDR likewise assumes the need for a robust force capable of protecting U.S. interests against a multiplicity of threats, including two capable nation-state aggressors. It breaks from the past, however, in its insistence that the U.S. Armed Forces must be capable of conducting a wide range of operations, from homeland defense and defense support to civil authorities, to deterrence and preparedness missions, to the conflicts we are in and the wars we may someday face.

In short, U.S. forces today and in the years to come can be plausibly challenged by a range of threats that extend far beyond the familiar "major regional conflicts" that have dominated U.S. planning since the end of the Cold War. We have learned through painful experience that the wars we fight are seldom the wars that we would have planned. For instance, in Iraq and Afghanistan, two theaters in which we are engaged simultaneously, we have seen that achieving operational military victory can be only the first step toward achieving our strategic objectives.

Because America's adversaries have been adopting a wide range of strategies and capabilities that can be brought to bear against the United States and its forces, allies, and interests, it is no longer appropriate to speak of "major regional conflicts" as the sole or even the primary template for sizing, shaping, and evaluating U.S. forces. Rather, U.S. forces must be prepared to conduct a wide variety of missions under a range of different circumstances. Ensuring flexibility of the whole force does not require each part of the force to do everything equally well. Not all challenges pose the same degree of threat to national interests, rely on U.S. military capabilities equally, or have the same chance of occurrence. Operations may also vary in duration and intensity for maritime, air, ground, space, and cyber forces. The QDR thus employed several scenario combinations to represent the range of likely and/or significant challenges anticipated in the future and tested its force capacity against them.

Combinations of scenarios assessed in the QDR included the following:

- A major stabilization operation, deterring and defeating a highly capable regional aggressor, and extending support to civil authorities in response to a catastrophic event in

the United States. This scenario combination particularly stressed the force's ability to defeat a sophisticated adversary and support domestic response.

- Deterring and defeating two regional aggressors while maintaining a heightened alert posture for U.S. forces in and around the United States. This scenario combination particularly stressed the force's combined arms capacity.
- A major stabilization operation, a long-duration deterrence operation in a separate theater, a medium-sized counterinsurgency mission, and extended support to civil authorities in the United States. This scenario combination particularly stressed elements of the force most heavily tasked for counterinsurgency, stability, and counterterrorism operations.

QDR force analysis also tested the force's ability to sustain robust levels of engagement overseas through forward stationing and routine rotational deployments. Successfully achieving any of the core missions of the U.S. Armed Forces requires strong security relationships with a host of allies and partners—relationships best enabled and maintained through both a long-term presence abroad and sustained, focused interactions between U.S. and partner forces.

In all of the scenario sets it tested, the Department assumed ongoing U.S. military engagement in presence and deterrence missions. The Department's force planning assumes that over time forces can be redirected from most prevent-and-deter activities in order to meet more pressing operational needs.

The types of contingencies that U.S. forces will actually be called upon to conduct in the future will certainly extend beyond the range of these examples. Reality is always less clear-cut and less predictable than our planning paradigms. For this reason, DoD's force planning stresses the importance of fielding forces that are versatile and that, in aggregate, can undertake missions across the full range of plausible challenges.

Force-Sizing Construct

Based on its assessment of the ability of U.S. forces to meet the types of demands outlined above, the Department developed a force-sizing construct to guide components in their resource allocation decisions. Whereas QDRs have often emphasized shaping the force beyond the five-year time frame, this QDR, of necessity, had to focus intensively on present conflicts as well as potential future needs. Our force-sizing construct therefore takes into account the realities of the current operational environment. In order to shape the force of the future, however, the construct also establishes sizing criteria for the midterm (5–7 years) and long term (7–20 years). To ensure a tight coupling of strategic ends to means, the QDR force-sizing construct is defined according to the priority objectives of the defense strategy.

Prevail

For the near- and midterm future, substantial numbers of U.S. forces will likely be operating in Afghanistan and U.S. forces in Iraq will continue a responsible drawdown in accordance with that nation's wishes and as Iraqi forces take on greater roles for providing security. These efforts will substantially determine the size and shape of major elements of U.S. military forces for several years.

Even following the drawdown of U.S. military forces in Iraq and the transition to greater Afghan leadership in providing security, there will continue to be enduring operational requirements in Afghanistan and elsewhere to defeat Al Qaeda and its allies. Nevertheless, we anticipate that less of the force will be dedicated to these missions. Our force planning thus assumes greater force availability for the remaining three priority objectives in the midterm to long term.

Prevent and Deter

While U.S. forces are heavily engaged in prevail efforts, the Department's prevent-and-deter activities will be focused on ensuring a defense in depth of the United States, preventing the emergence or reemergence of transnational terrorist threats, including Al Qaeda; and deterring other potential major adversaries.

As our forces transition into a period of less-intensive sustained operations, the Department's force planning assumes an ability to undertake a broadened and deeper range of prevent-and-deter missions, acting wherever possible as part of a whole-of-government approach and in concert with allies and partners. The Department's efforts to deter threats to U.S. territory in-depth and prevent the growth or reemergence of transnational terrorist movements will continue and may grow in some areas. Our planning assumes even greater force availability for efforts to deter other would-be aggressors through forward presence and sustained operations to build partnership capacity.

Prepare

Even as it works to prevail in current overseas operations, our force planning requires the U.S. military to prepare for significant new challenges. This includes defending the United States and supporting civil authorities in the event of an emergency. It also includes the requirement to deter potential



U.S. Navy Engineman 2nd Class Kpaku Palay prepares for deployment to critical coastal and inshore areas of Iraq and Kuwait with a simulated escort of a high value asset transiting San Diego Bay, Nov. 7, 2008. U.S. Navy photo by Mass Communication Spc. 1st Class R. Jason Brunson.

challengers in times of crisis and, if necessary, defeat their threats to U.S. and allied interests.

In the midterm to long term, U.S. military forces must plan and prepare to prevail in a broad range of operations that may occur in multiple theaters in overlapping timeframes. Such operations include supporting civil authorities in response to a catastrophic event in the United States, deterring and defeating state and non-state aggressors, and conducting large-scale stability operations. Operations over the past eight years have stressed the ground forces disproportionately, but the future operational landscape could also portend significant long-duration air and maritime campaigns for which the U.S. military must be prepared. The QDR scenario combinations described earlier in this section provide insight into the potential number and size of overlapping operations for which U.S. military forces must plan to prepare.

Preserve and Enhance

The Department must always be vigilant in its management of the All-Volunteer Force. U.S. forces are second to none, and the health and vitality of the force is especially critical in light of the stresses being generated by today's missions. The Department will be prepared to manage the risks of significant new military missions that may arise during this time, which may require shifts in current operations or further mobilization of the Reserve Component.

Even as the United States transitions its role in Iraq and, later, Afghanistan, the Department's force planning assumes a taxing operational environment. Our preserve-and-enhance efforts will focus on transitioning to sustainable rotation rates that protect the force's long-term health. The Department plans that in times of significant crisis, U.S. forces will be prepared to experience higher deployment rates and lower dwell times for up to several years at a time and/or mobilize the Reserve Component. This will typically be the case if the United States is engaged for long periods in more than one large operation, such as Operation Iraqi Freedom. The Department will also expand its Civilian Expeditionary Workforce to augment the military effort as required.

Main Elements of U.S. Force Structure, FY 2011 – 15

Taking into account the demands of a dynamic and complex security environment, the requirements of U.S. defense strategy, the need for enhancements to key capabilities across a wide range of missions, and the need for forces with sufficient aggregate capacity to meet the criteria laid out above, DoD has determined that U.S. forces, for the duration of the FY 2011–15 Future Years Defense Program, will conform to the general parameters outlined below. Where ranges of force elements are provided, these reflect variations in force levels that are planned across the FYDP. Our judgment with regard to the overall capacity of the force reflects in part the heavy demands being placed on portions of the force by ongoing operations. As those demands evolve, so too might the appropriate size and mix of forces. In addition, in assessing the force's shape and

size, the Department made prudent assumptions regarding the likely contribution both of American civilian agencies and of key allies and partners to current and future operations.

Department of the Army:

4 Corps headquarters

18 Division headquarters

73 total brigade combat teams (BCTs) (45 Active Component [AC] and 28 Reserve Component [RC]), consisting of:

40 infantry brigade combat teams (IBCTs)

8 Stryker brigade combat teams (SBCTs)

25 heavy brigade combat teams (HBCTs)

21 combat aviation brigades (CABs) (13 AC and 8 RC)

15 Patriot battalions; 7 Terminal High Altitude Area Defense (THAAD) batteries

Department of the Navy:

10 – 11 aircraft carriers and 10 carrier air wings

84 – 88 large surface combatants, including 21 – 32 ballistic missile defense-capable combatants and Aegis Ashore

14 – 28 small surface combatants (+14 mine countermeasure ships)

29 – 31 amphibious warfare ships

53 – 55 attack submarines and 4 guided missile submarines

126 – 171 land-based intelligence, surveillance, reconnaissance (ISR) and electronic warfare (EW) aircraft (manned and unmanned)

3 maritime prepositioning squadrons

30 – 33 combat logistics force ships (+1 Mobile Landing Platform [MLP])

17 – 25 command and support vessels (including Joint High Speed Vessels, 3 T-AKE Class dry cargo/ammunition ships, 1 mobile landing platform)

51 roll-on/roll-off strategic sealift vessels

3 Marine expeditionary forces

4 Marine divisions (3 AC and 1 RC)

11 infantry regiments

4 artillery regiments

4 Marine aircraft wings (6 fixed-wing groups, 7 rotary-wing groups, 4 control groups, 4 support groups)

4 Marine logistics groups (9 combat logistics regiments)

7 Marine expeditionary unit command elements

Department of the Air Force:

8 ISR wing-equivalents (with up to 380 primary mission aircraft)

30 – 32 airlift and aerial refueling wing-equivalents (with 33 primary mission aircraft per wing-equivalent)

10 – 11 theater strike wing-equivalents (with 72 primary mission aircraft per wing-equivalent)

5 long-range strike (bomber) wings (with up to 96 primary mission aircraft)

6 air superiority wing-equivalents (with 72 primary mission aircraft per wing-equivalent)

3 command and control wings and 5 fully operational air and space operations centers (with a total of 27 primary mission aircraft)

10 space and cyberspace wings

Special Operations Forces:

Approximately 660 special operations teams (includes Army Special Forces Operational Detachment-Alpha[ODA] teams, Navy Sea, Air, and Land [SEAL] platoons, Marine special operations teams, Air Force special tactics teams, and operational aviation detachments [OADs])

3 Ranger battalions

165 tilt-rotor/fixed-wing mobility and fire support primary mission aircraft

The formations and platform types shown here generally encompass only the major combat elements of each of the military departments. Nuclear forces, which will be detailed in the report of the Nuclear Posture Review, are not shown here. Neither are most of the noncombat and “enabler” elements that play such crucial roles in supporting effective operations in complex environments. Selected mobility resources, including sealift, prepositioning, and airlift assets, are listed above. The capacity of these force elements was tested and validated in the Department’s Mobility Capabilities Requirements Study 2016.

The absence from this section of some elements of the force is in no way a reflection of their relative importance. As noted at the beginning of this section of the report, supporting and enabling capabilities are vital to effective operations and they will be resourced accordingly. But the purpose of listing the building blocks shown above is to provide a summary portrayal of the main force elements around which the rest of the force is built.

The Department will continue to strive to ensure a proper balance between the overall size of U.S. combat forces, the capabilities and capacity of key support elements and enablers, and investments in sustained and new capabilities that will be needed by forces called on to carry out future missions. As noted above, in this dynamic security environment U.S. forces must continue to adapt. America’s Armed Forces have a long history of devising creative solutions to new challenges and this spirit of innovation will be essential as we further evolve and rebalance the force in the years to come.

TAKING CARE OF OUR PEOPLE

America's men and women in uniform constitute the Department's most important resource. Prevailing in today's wars while working to prevent future conflict depends on the Department's ability to create and sustain an all-volunteer force that is trained and resourced to succeed in the wide range of missions we ask them to execute. Years of war have imposed considerable strain on the force. Multiple long deployments are taking a serious toll on our people and their families, and the Department remains focused on their health and welfare. As part of this focus, the QDR has elevated the need to preserve and enhance the All-Volunteer Force and included this priority in our force planning and our strategy deliberations. From the care of our wounded warriors, to family support, to the recruiting and retention of personnel, we must tend to the health of the All-Volunteer Force, for it constitutes the foundation of our national defense.

Wounded Warrior Care

Apart from working to prevail in ongoing conflicts, caring for our wounded warriors is our highest priority, and we will strive to provide them the top-quality physical and psychological care that befits their service and sacrifice. Providing world-class care and management, benefit delivery, and standardization of services among the Military Departments and federal agencies continues to be the focus of the Department's most senior leadership. Our wounded, ill, or injured service members deserve every opportunity to return to active duty following their recovery, or to make a seamless transition to veteran status if they cannot be returned to active duty. The Department is working to improve the treatment of our wounded warriors in many ways, which include:

- Improving health benefits for military members and their families by increasing funding in FY 2011 to provide more than 1000 additional personnel for Wounded Warrior Support, continuing the implementation of a military health system enterprise-wide



U.S. Army Sgt. Saul Martinez intercepts a passed ball during an intramural wheelchair basketball game between soldiers from the Army Warrior Transition Unit and Marines from the Marine Wounded Warrior Battalion–West detachment at Naval Medical Center San Diego in California on Jan. 14, 2009. DoD photo by Petty Officer 3rd Class Jake Berenguer, U.S. Navy.

approach to prioritizing requirements for modernizing treatment facilities, and increasing overall health care funding by 9 percent from FY 2010.

- Establishing Centers of Excellence for the prevention, diagnosis, and treatment of military eye injuries, including those related to traumatic brain injury, hearing loss and auditory system injuries, and traumatic extremity injuries and amputations.
- Increasing funding and attention to wounded warrior initiatives across the Military Departments, including the Army's \$530 million investment in the construction of six Wounded Warrior Complexes and twenty Soldier Family Assistance Centers, as well as the Marine Corps' Wounded Warrior Regimental Headquarters and Wounded Warrior Battalions; increasing the number of Air Force Recovery Care Coordinators; and expanding the Navy's Safe Harbor program, which reviews, evaluates, and provides a range of assessment, support, and treatment programs to Active and Reserve Sailors and their families.
- Establishing a single Disability Evaluation System that creates a simpler, faster, and more consistent process for determining whether wounded, ill, or injured service members may continue their military service or should transition to veteran status.
- Broadening the scope of information sharing between the Departments of Defense and Veterans Affairs, to support stronger continuity of care and benefits delivery for military members. Within five years, the Virtual Lifetime Electronic Record will enhance the availability of administrative and health information to DoD, VA, and third-party health providers, better ensuring seamless health care through active service and beyond.
- Creating innovative policies, processes, and programs aimed at ensuring continuity in mental health care and counseling services for military personnel as they transition from one duty station to another, or transition from military to veteran care.
- Working with the Department of Health and Human Services, the Department will place 200 Public Health Service mental health professionals in the military health system.

Managing the Deployment Tempo

Ensuring time at home station between deployments and honoring our commitment to release service members at the end of their service obligations remain among the most tangible demonstrations of commitment to our service members and their families. Years of conflict requiring long and numerous deployments have imposed significant strain on our uniformed men and women—physically and psychologically.

The Department strives to provide service members and their families with greater clarity and predictability regarding current and planned deployments. Between deployments, we must do everything possible to give our personnel sufficient time to recover.

- Our near-term planning objective for the Active Component remains two years at home station for every one year deployed. Our objective for mobilization of Guard and Reserve units remains five years demobilized for every one year mobilized. Today's global demands will require a number of selected Guard/Reserve units to be remobilized more frequently than this standard, however. Just as we are asking the active forces to do more in this time of national need, so we must ask more of the Reserve Component.
- The status of U.S. forces in Korea is changing from being forward-deployed to being forward-stationed with family members. When fully implemented, this change will enable forces to deploy from Korea, helping to expand the pool of available forces for global contingencies.

Recruiting and Retention

Our recruiting efforts are long-term investments that can yield generational gains. After more than five years of the most challenging recruiting environment since the 1973 inception of the All-Volunteer Force, the Department succeeded in meeting its recruiting and retention objectives in 2009. Nevertheless, in coming years, we will face additional challenges to our ability to attract qualified young men and women into the Armed Forces. Among them are a large and growing proportion of youth who are ineligible to serve in the military for medical, criminal, ethical, or physical reasons. We will also be challenged to recruit personnel with specialized skills in such areas foreign languages, medicine, and computer network operations.



Secretary of Defense Robert M. Gates shakes the hand of a Marine recruit in training at the Edson Firing Range on Marine Corps Base Camp Pendleton, Calif., on Jan. 7, 2008. Camp Pendleton is the Corps' largest West Coast expeditionary training facility, encompassing more than 125,000 acres of Southern California terrain. DoD photo by Cherie A. Thurlby.

While we continue to employ a mix of programs and incentives to recruit quality personnel, we are also focused on retaining those with valuable operational experience. Examples of recent efforts to improve retention include:

- Revising our bonus policies to allow the Military Departments to pursue innovative ways to retain quality personnel. For example, the Marine Corps helps ensure retention of combat-experienced Marines through the Selective Reenlistment Bonus program.
- Employing more flexible ways for personnel to serve, by implementing programs designed to better enable transitions from Active and Reserve Component service. For example, the Navy is developing a career intermission pilot program that, when implemented, could allow an active Sailor to join the Selected Reserve for a period of time before returning to active duty, providing better options for work-life balance and career flexibility.

Supporting Families



U.S. Navy Petty Officer 2nd Class Jonathan Mackey reunites with his son during the homecoming of the guided-missile cruiser USS Lake Champlain in San Diego, Calif., July 30, 2009. U.S. Navy photo by Petty Officer 2nd Class Daniel Barker.

We have a critical and enduring obligation to better prepare and support families during the stress of multiple deployments. Robust single member, spouse, child, and youth services are no longer desirable options, but are services essential to maintain the health of the All-Volunteer Force. Programs such as quality education for children, expanded child care, outreach to Guard and Reserve members and families, accessible family support assistance, referrals for counseling,

financial education and training, pre-teen and teen programs, and access to training certification opportunities for spouses all provide lifelines of support for service members and their families stationed around the globe. Examples of our efforts to improve and renew family support programs include:

- Increasing the resources devoted to institutionalizing service member and family support programs across the Department—a 41 percent increase in FY 2011 from FY 2010.
- Replacing or renovating 106 of 192 Department of Defense Educational Activity (DoDEA) schools by 2015.
- Normalizing the stationing of U.S. forces in the Republic of Korea from unaccompanied to accompanied tours, which will result in nearly 5,000 service members and families being forward-stationed on the peninsula. The Department's long-term goal is to phase out all unaccompanied tours in Korea.

- Continuing efforts of the Military Departments to improve family and community support services. For example, the Marine Corps is hiring dedicated civilian family readiness officers for all active and reserve battalion-level units, and the Army and Navy are implementing new programs to increase family support for reserve personnel.
- Building on the authorization contained in the 2010 National Defense Authorization Act, which allows DoD to compensate military members whose families care for them during recovery from catastrophic medical conditions. We are assessing the adequacy of this compensation and developing recommendations based on the findings.

Keeping Faith with the Reserve Component

Achieving the defense strategy's objectives requires vibrant National Guard and Reserves that are seamlessly integrated into the broader All-Volunteer Force. Prevailing in today's wars requires a Reserve Component that can serve in an operational capacity—available, trained, and equipped for predictable routine deployment. Preventing and deterring conflict will likely necessitate the continued use of some elements of the Reserve Component—especially those that possess high-demand skill sets—in an operational capacity well into the future.

Over the past eight years, the National Guard and Reserves have consistently demonstrated their readiness and ability to make sustained contributions to ongoing operations. The challenges facing the United States today and in the future will require us to employ National Guard and Reserve forces as an operational reserve to fulfill requirements for which they are well-suited in the United States and overseas. For example, the National Guard often serves at the forefront of DoD operations. The associated incentive structure within the Reserve Component must be used to create easier access to those capabilities that are routinely in high demand.

At the same time, within this operational reserve, our nation must have a force generation model that provides sufficient strategic depth. As the operational environment allows, the Department will seek ways to rebalance its reliance on the Reserve Component to ensure the long-term viability of a force that has both strategic and operational capabilities.

Effective use of the Reserve Component also helps preserve and enhance the All-Volunteer Force by increasing its capacity and expanding the range of capabilities it provides. Using the National Guard and Reserves in this way will lower overall personnel and operating costs, better ensure the right mix and availability of equipment, provide more efficient and effective use of defense assets, and contribute to the sustainability of both the Active and Reserve Components. Today's National Guard and Reserve men and women volunteer knowing that they will periodically serve on active duty. They also serve expecting to be judiciously used, given meaningful work to do, and provided the right training and equipment to complete the mission. The Department will work to meet these expectations.

The Reserve Component has untapped capability and capacity. Over the coming year, the Department will conduct a comprehensive review of the future role of the Reserve Component, including an examination of the balance between active and reserve forces.

Developing Future Military Leaders



Thirty-one U.S. military members take the oath of allegiance before friends and family during a U.S. military naturalization ceremony in the Pentagon courtyard, Sept. 10, 2009. DoD photo by First Class Petty Officer Molly A. Burgess, U.S. Navy.

The Department will continue to work to ensure that America's cadre of commissioned and noncommissioned officers are prepared for the full range of complex missions that the future security environment will likely demand. Too often, a focus on weapons acquisition programs and overall force structure crowd out needed attention concerning how the Military Departments generate, train, and sustain their leaders. As part of our commitment to ensure

that tomorrow's leaders are prepared for the difficult missions they will be asked to execute, DoD will place special emphasis on stability operations, counterinsurgency, and building partner capacity skill sets in its professional military education and career development policies. Examples of DoD efforts in this area include:

- Building expertise in foreign language, regional, and cultural skills. We will continue our emphasis on enhancing these skills in general purpose force officers during pre-accession training. Given the inherent link between language and cultural expertise and mission success, this area requires continued focus.
- Recognizing joint experience whenever and wherever it occurs in an officer's career. Until recently, wartime service in combat zones—where joint and multinational operations are common—was not recognized as fulfilling the requirements of joint service for purposes of promotion. Reserve Component officers will also have the opportunity to have their joint experiences recognized to earn the same qualifications as their Active Component counterparts.
- Recognizing the critical role that professional military education plays in the development of military officers, the Department will work to ensure that all its educational institutions are resourced and staffed with the right mix of civilian and military experts who can help prepare the next generation of leaders. Given the continuing need to develop military

leaders who can work effectively with a range of civilian counterparts, we will also look to expand opportunities for military officers to attend civilian graduate institutions.

Developing the Total Defense Workforce

The Department is facing mission requirements of increasing scope, variety, and complexity. To ensure the availability of needed talent to meet future demands, we are conducting a deliberate assessment of current and future workforce requirements. This effort will ensure that the Department has the right workforce size and mix (military/civilian/contractor) with the right competencies. This assessment will be enterprise-wide, enabling the Department to better recruit and retain personnel with the most-needed skills.



Civilians from the Department of Defense's Executive Leadership Development Program learn how to properly wear the Interceptor Body Armor with the help of soldiers from 2nd Battalion 9th Infantry Mar. 25, 2009 at Rodriguez Live Fire Complex. U.S. Army Photo by Sgt. Scott Kim.

As part of these efforts, the Department is working to better employ the talents of our civilian personnel to meet today's challenges. For example, the Secretary of Defense has created the Civilian Expeditionary Workforce (CEW), which will provide deployable civilian experts to support efforts in Afghanistan, Iraq, and other contingencies. Specifically, the CEW is designed to enhance DoD's ability to work alongside and help build the capacity of partner defense ministries, in so doing reflecting the importance of civilian oversight. By the end of FY 2011, at least 90 percent of the deploying CEW personnel will have access to standardized pre-deployment training. A parallel effort is under way to synchronize civilian and military leadership training, with the goals of ensuring common professional training and education between senior executive service (SES) and flag officers and increasing joint capability for deployment of SES personnel. As we continue to implement the CEW, the Department will ensure that those who participate are given the benefits and support programs required to facilitate their assignments abroad.

The services provided by contractors will continue to be valued as part of a balanced approach that properly considers both mission requirements and overall return. In keeping with the Administration's goal of reducing the government's dependence on contractors, the Department introduced its in-sourcing initiative in the FY 2010 budget. Over the next five years, the Department will reduce the number of support service contractors to their pre-2001 level of 26 percent of the workforce (from the current level of 39 percent) and replace them, if needed, with

full-time government employees. These efforts will help establish a balanced total workforce of military, government civilians, and contractor personnel that more appropriately aligns public- and private-sector functions, and results in better value for the taxpayer.

STRENGTHENING RELATIONSHIPS

Achieving the Department's strategic objectives requires close collaboration with key counterparts at home and with allies and partners abroad. Through its foreign defense relationships, the United States not only helps avert crises but also improves its effectiveness in responding to them. Moreover, by integrating U.S. defense capabilities with other instruments of statecraft—including diplomacy, development, law enforcement, trade, and intelligence—the nation can ensure that the right mix of expertise is at hand to take advantage of emerging opportunities and to thwart potential threats. The Department will therefore strengthen its relationships with allies and like-minded partners, develop its supporting global defense posture, and build close and sustained relationships with U.S. government agencies and other critical actors at home.

Strengthening Key Relationships Abroad

Sustaining existing alliances and creating new partnerships are central elements of U.S. security strategy. The United States cannot sustain a stable international system alone. In an increasingly interdependent world, challenges to common interests are best addressed in concert with like-minded allies and partners who share responsibility for fostering peace and security. America's national security and defense strategies depend on strong foreign ties, including a vibrant network of defense alliances and partnerships adapted to this challenging era. Building and sustaining such networks and partnerships will require effective strategic communication. We will need to improve our ability to understand the concerns, perceptions, and attitudes of foreign governments and populations, as well as the ways in which our words and actions may affect allies and partners. Thoughtful engagement, communication, and collaboration with allies and partners who share our interest in fostering peace and security remain essential.

Central to the security of the United States is a strong transatlantic partnership, which is underpinned by the bilateral relationships between the United States and the governments of Europe. We will continue to work with this community of like-minded nations, whether by engaging with allies still shaping their democracies after decades of living in the shadow of the Soviet Union, building on the benefits of French reintegration into NATO's military structure, or addressing new security issues such as those arising in the Arctic region. Our shared history and interests with the United Kingdom have created a steadfast bond, strengthened in recent years through operations together in Afghanistan, Iraq, and elsewhere.

The United States is committed to the North Atlantic Treaty Organization, the cornerstone of transatlantic security since the beginning of the Cold War. NATO is critical to ensuring the security and stability of Europe by addressing a broad range of security issues both inside and

outside NATO's treaty area. We will work to ensure a strong NATO that provides a credible Article 5 security commitment, deters threats to Alliance security, has access to U.S. capabilities such as the phased, adaptive approach to European missile defense to address the proliferation of ballistic missiles, and takes on new threats such as cyberspace attacks. The U.S. relationship with the European Union, together with the NATO-EU relationship, has become even more important in recent years in projecting the full force of transatlantic power. The need for NATO to develop its own comprehensive civil-military approach, as well as greater cooperation with the EU and other international organizations, is especially evident in Afghanistan, where every NATO ally and the EU are contributing to the international effort—including personnel contributions to the International Security Assistance Force—to disrupt, dismantle, and defeat Al Qaeda and eliminate its safe havens.

Nations Contributing Personnel to the International Security Assistance Force

Albania*	Denmark*	Latvia*	Romania*
Armenia	Estonia*	Lithuania*	Singapore
Australia	Finland	Luxembourg*	Slovakia*
Austria	France*	Macedonia	Slovenia*
Azerbaijan	Georgia	Montenegro	Spain*
Belgium*	Germany*	Netherlands*	Sweden
Bosnia and Herzegovina	Greece*	New Zealand	Turkey*
Bulgaria*	Hungary*	Norway*	Ukraine
Canada*	Iceland*	Poland*	United Kingdom*
Croatia*	Ireland	Portugal*	United States*
Czech Republic*	Italy*		* NATO Members

The countries of Eurasia are positioned to improve Europe's energy security, support international efforts in Afghanistan, and play critical roles in countering transnational threats, including extremism, weapons proliferation, and illicit trafficking. Yet the region contains unresolved conflicts that inhibit the ability of many of its countries to counter these threats. The United States is working with its NATO allies and partners to promote peaceful resolutions to protracted conflicts and to build our partners' security capacity, support their defense reform efforts, and facilitate their integration into Euro-Atlantic institutions.

The United States and Russia share many interests—including countering proliferation and confronting terrorism. We are working with Moscow to develop a new START Treaty—an important step in the President's initiative toward a world free of nuclear weapons. The new START Treaty will further reduce both nations' nuclear arsenals while maintaining important

treaty-monitoring provisions. We will seek out opportunities to work with Moscow on emerging issues, such as the future of the Arctic and the need for effective missile defense architectures designed to protect the region from external threats. At the same time, the United States will continue to engage with Russia's neighbors as fully independent and sovereign states.

The foundation of our presence in Asia remains our historical treaty alliances. These alliances have helped maintain peace and stability for more than sixty years, particularly through the continued presence of capable U.S. forces in the region, and we remain steadfastly committed to the security commitments embodied in these agreements. The regional and global security environments are more complex today, however. Global peacekeeping, stability, and reconstruction operations; nonproliferation activities; missile defense cooperation; and energy security initiatives are all critical issues for regional defense cooperation. This emerging security landscape requires a more widely distributed and adaptive U.S. presence in Asia that relies on and better leverages the capabilities of our regional allies and partners.

In Northeast Asia, DoD is working closely with key allies Japan and the Republic of Korea (ROK) to implement our agreed-on plans and shared visions to build a comprehensive alliance of bilateral, regional, and global scope; realign our force postures; restructure allied security roles and capabilities; and strengthen our collective deterrent and defense capabilities. These changes will firmly position these alliances for the 21st-century security landscape and ensure their enduring strength, readiness, and resilience for the future. In the Pacific



U.S. Air Force Maj. Miralba Fernandez-Covas works closely with South Korean air force officers Maj. Kim Heonjoong and 1st Lt. Cho Sungmin during Exercise Key Resolve/Foal Eagle, Mar. 17, 2009, at Osan Air Base, South Korea. U.S. Air Force photo by Staff Sgt. Benjamin Rojek.

Rim, we are deepening our partnership with Australia, an alliance that stretches beyond Asia to provide essential cooperation on a wide range of global security challenges. In Southeast Asia, we are working to enhance our long-standing alliances with Thailand and the Philippines, deepen our partnership with Singapore, and develop new strategic relationships with Indonesia, Malaysia, and Vietnam, to address issues such as counterterrorism, counternarcotics, and support to humanitarian assistance operations in the region. The United States is also encouraging the continued development of multilateral institutions and other integrated approaches to regional security affairs.

China's growing presence and influence in regional and global economic and security affairs is one of the most consequential aspects of the evolving strategic landscape in the Asia-Pacific region and globally. In particular, China's military has begun to develop new roles, missions, and capabilities in support of its growing regional and global interests, which could enable it to play a more substantial and constructive role in international affairs. The United States welcomes a strong, prosperous, and successful China that plays a greater global role. The United States welcomes the positive benefits that can accrue from greater cooperation. However, lack of transparency and the nature of China's military development and decision-making processes raise legitimate questions about its future conduct and intentions within Asia and beyond. Our relationship with China must therefore be multidimensional and undergirded by a process of enhancing confidence and reducing mistrust in a manner that reinforces mutual interests. The United States and China should sustain open channels of communication to discuss disagreements in order to manage and ultimately reduce the risks of conflict that are inherent in any relationship as broad and complex as that shared by these two nations.

As the economic power, cultural reach, and political influence of India increase, it is assuming a more influential role in global affairs. This growing influence, combined with democratic values it shares with the United States, an open political system, and a commitment to global stability, will present many opportunities for cooperation. India's military capabilities are rapidly improving through increased defense acquisitions, and they now include long-range maritime surveillance, maritime interdiction and patrolling, air interdiction, and strategic airlift. India has already established its worldwide military influence through counterpiracy, peacekeeping, humanitarian assistance, and disaster relief efforts. As its military capabilities grow, India will contribute to Asia as a net provider of security in the Indian Ocean and beyond.

The United States also recognizes that Pakistan is at the geopolitical crossroads of South and Central Asia, giving it an important regional role in security and stability. Extremism, economic instability, resource scarcity, and illicit trafficking all imperil Pakistan's future. A secure, stable Pakistan is vital to U.S. national security, the region, and the world. For these reasons, the United States has committed to a long-term strategic partnership with Pakistan that is built on a foundation of mutual interests and joint efforts. We will work with Pakistan to strengthen its capacity to combat extremism, and we will provide substantial resources to support Pakistan's democracy and development.

The United States has a substantial interest in the stability of the Indian Ocean region as a whole, which will play an ever more important role in the global economy. The Indian Ocean provides vital sea lines of communication that are essential to global commerce, international energy security, and regional stability. Ensuring open access to the Indian Ocean will require a more integrated approach to the region across military and civilian organizations. An assessment that

includes U.S. national interests, objectives, and posture implications would provide a useful guide for future defense planning.

Stability in the Middle East remains critical to U.S. interests. As we strive toward a comprehensive peace in the region between Israel and its neighbors, the closeness of our defense relationship and cooperation with Israel will continue. Enduring U.S. security cooperation with Egypt, Lebanon, Jordan, Saudi Arabia, Yemen, and the Gulf States continues to strengthen partner capabilities to counter extremism and other regional threats, including the proliferation of ballistic missiles. A persistent Al Qaeda threat will necessitate expanded counterterrorism cooperation with regional partners, including in countering terrorist financing, disseminating anti-extremist messages, and protecting critical infrastructure. A variety of maritime security challenges, including piracy, smuggling, and human trafficking, will require greater participation in regional maritime security organizations in order to protect vital sea lines of communication. We will also continue to work with our Middle East partners to develop a regional architecture that broadens and improves interoperable air and missile defenses. Finally, as our forces continue their drawdown from Iraq, the United States remains committed to developing a strategic partnership that promotes peace and prosperity in Iraq and the region.

The United States will continue working with African partners to help foster stability and prosperity throughout the continent. The need to assist fragile, post-conflict states, such as Liberia, the Democratic Republic of the Congo, and Sudan, and failed states such as Somalia, and transnational problems, including extremism, piracy, illegal fishing, and narcotics trafficking, pose significant challenges. America's efforts will hinge on partnering with African states, other international allies and partners, and regional and subregional security organizations to conduct capacity-building and peacekeeping operations, prevent extremism, and address humanitarian crises.

The United States will continue to work toward a secure and democratic Western Hemisphere by developing regional defense partnerships that address domestic and transnational threats such as narcoterrorist organizations, illicit trafficking, and social unrest. We will continue to work closely with Mexico to improve our cooperative approach to border security, enhance defense capacity



Canadian soldiers from the Special Purpose Marine Air Ground Task Force (SPMAGTF) 24, depart a U.S. Navy landing craft, air cushion and deploy onto Mayport Beach, Fla., April 25, during Partnership of the Americas (POA) 2009. POA is an annual joint exercise that focuses on enhancing interoperability between U.S. Marines and partner-nation Marines. U.S. Marine Corps photo by Chief Warrant Officer Keith A. Stevenson.

for coordinated operations, and address other issues. The Department will also enhance defense relationships and continue to work with Canada in the context of regional security, increased interaction in the Arctic, and combat operations in Afghanistan. The United States remains committed to building a strong partnership with Brazil—the hemisphere’s second largest economy and second most populous democracy—on all regional issues and global security concerns.

The Role of U.S. Defense Posture

The United States is a global power with global responsibilities. Including operations in Afghanistan and Iraq, approximately 400,000 U.S. military personnel are forward-stationed or rotationally deployed every day around the world to help sustain U.S. capacity for global reach and power projection. There are three key elements to our defense posture: forward-stationed and rotationally deployed forces, capabilities, and equipment; a supporting overseas network of infrastructure and facilities; and a series of treaty, access, transit, and status-protection agreements and arrangements with allies and key partners.

Our experience of operating as part of multinational coalitions in long-duration conflicts has demonstrated the importance of continually fostering long-term relationships with allies and partners. For operations in Iraq and Afghanistan, our relationships both with those nations



The Nimitz-class aircraft carrier USS George Washington (CVN 73) transits the Pacific Ocean while an SH-60B Sea Hawk helicopter assigned to the Helicopter Anti-Submarine Squadron Light (HSL) 51 conducts flight operations in the background on Nov. 18, 2009. U.S. Navy photo by Mass Communication Specialist 3rd Class Charles Oki.

contributing forces and with those enabling transit of logistical support have proved vital.

The Department must ensure that our overseas posture adapts and evolves in ways that respond to—and anticipate—changes in the international security environment. The persistence of conflict, the diffusion of power around the world, the proliferation of nuclear and other weapons technologies, and rising complexity in sea, air, space and cyberspace domains pose new security challenges that require

innovative adjustments to our defense posture. Toward this end, we will seek a new architecture of cooperation, one that generates openings for the United States to work together with allies and partners on shared regional and global security opportunities and challenges.

Toward a Cooperative and Tailored Posture

In a future marked by continued globalization and enduring transnational threats, the United States and its allies and partners will face a multiplicity of shared challenges and opportunities. This dynamic security environment calls for a cooperative and tailored approach to our global defense posture.

The United States will seek to strengthen or add cooperative measures to address shared regional and global security concerns where U.S. interests align with those of our allies and partners. Such an approach recognizes that the United States cannot effectively manage these security challenges on its own, nor should it attempt to do so.

Viewing defense posture through a cooperative lens, the Department will support development of—and capitalize on—the specialization and expertise of allies, partners, and other U.S. government agencies. The United States will work with our allies and partners to effectively use limited resources by generating efficiencies and synergies from each other’s portfolios of military capabilities, thereby enhancing our collective abilities to solve global security problems. The presence of U.S. military forces overseas can be a powerful catalyst for promoting multilateral approaches and regional security architectures that serve both U.S. and partner states’ interests.

Our approach to defense posture begins at home, with significant government collaboration in its development, articulation, and execution. Global defense posture is a key means of communicating U.S. foreign and security policy and thus must be closely coordinated throughout the national security community.

The United States will also apply a regionally tailored approach in determining the posture of its forces. A tailored defense posture reflects unique regional political and security dynamics by bringing into harmony the right combination of forward-stationed and rotational forces and capabilities, prepositioned equipment and basing infrastructure, and relationships and agreements. It calibrates the U.S. presence in each region to best support ongoing and future operations, respond to crises, and prevent and deter threatening activities. It also recognizes that augmenting our overseas presence is not always the most effective method to achieve our strategic objectives.

The Department will be guided by the following principles in making future defense posture decisions.

First, forward-stationed and rotationally deployed U.S. forces continue to be relevant and required. The long-term presence of U.S. forces abroad reassures allies and partners of our commitment to mutual security relationships, generates enduring trust and goodwill with host nations, and increases regional and cultural expertise in the force. We cannot simply “surge” trust and relationships on demand.

Second, our defense posture will balance the need for a permanent overseas presence that assures allies and partners of our commitments with the need for a flexible ability to respond to contingencies, emerging threats, and global security needs in distant theaters.

Third, the United States will balance the need for assured access to support ongoing operations with the risks of introducing fragility into its lines of communication. For example, generating and sustaining a defense posture to support ongoing operations in Afghanistan has proved difficult. To meet this and similar challenges, we will seek innovative ways to add strategic depth to our posture network and prioritize the development and maintenance of enduring relationships with trusted partners that serve mutual security interests over the long term.

Fourth, America's defense posture should provide a stabilizing influence abroad and be welcomed by the host nation. Forward stationing and rotational deployment of U.S. forces are designed to contribute to regional security and will be enhanced, lessened, or reshaped as necessary to reassure allies and partners and strengthen deterrence. The United States will work closely with allies and partners to maintain an appropriately tailored military presence that serves a constructive role in maintaining regional security.

Fifth, our defense posture will continuously adapt to changes in the strategic environment. Deliberate, ongoing assessment of national interests, military requirements and the strategic environment should guide U.S. global defense posture planning. In the emerging security environment, the United States will tailor its defense posture to address challenges such as insurgency and terrorism, the proliferation of nuclear technology and theater ballistic missiles, anti-access and area-denial capabilities, and the maintenance of secure access to the global commons.

Regional Posture Perspectives

The United States will emphasize the following priorities in adapting and developing its global defense posture over the next five years:

- Reaffirm our commitment to Europe and NATO, including through the development of European missile defense capabilities;
- Work with allies and key partners to ensure a peaceful and secure Asia-Pacific region;
- Balance ongoing operations, crisis response, and prevent-and-deter activities in the development of a strategic defense posture in the broader Middle East, Africa, and Central and South Asia; and
- Support partnership capacity-building efforts in key regions and states.

Europe

The security of Europe has been central to American national interests for much of the past century. The American defense posture in Europe has changed significantly since the end of the Cold War as legacy forces and basing structures transformed into a lighter, more flexible, and more deployable forward posture. Maintaining a robust U.S. military presence in Europe serves to deter the political intimidation of allies and partners;



Several military participants in this year's Combined Endeavor are recognized during the closing ceremony at Willem Lodewijk Van Nassaukazerne, Zoutkamp, the Netherlands, Sept. 17, 2009. U.S. Air Force photo by Staff Sgt. Joshua L. DeMotts.

promote stability in the Aegean, Balkans, Caucasus, and Black Sea regions; demonstrate U.S. commitment to NATO allies; builds trust and goodwill among host nations; and facilitate multilateral operations in support of mutual security interests both inside and outside the continent.

Working with allies and partners, the United States will therefore ensure a European defense posture network that advances U.S. interests and communicates its commitment to the security of NATO allies. Pending the review of NATO's Strategic Concept and an accompanying U.S. assessment of our European defense posture network, the United States will retain four brigade combat teams and an Army Corps headquarters forward-stationed on the continent. The United States will also begin the deployment of a revised U.S. missile defense architecture in Europe and an enhanced forward-deployed naval presence in the region to support this initiative and enable increased multilateral cooperation on maritime security.

The Pacific

The United States has been a Pacific power for more than a century. The vast distances of the Pacific and the low density of U.S. basing and infrastructure there place a premium on forward-stationed and forward-deployed U.S. forces. We seek to sustain and strengthen our Asia-Pacific alliances and partnerships to advance mutual security interests and ensure sustainable peace and security in the region, while also promoting contributions by our allies and partners to global security. Toward this end, we will augment and adapt our forward presence, which reassures allies of the U.S. commitment to their security. At the same time, we will encourage our allies and partners to enhance their roles in security and in regular multilateral security cooperation within the region to build trust, increase transparency, and reduce the risks of crisis or conflict.



The Seawolf-class attack submarine USS Connecticut (SSN 22) is underway in the Pacific Ocean on Nov. 17, 2009, with an HH-60H Sea Hawk helicopter from the Chargers of Helicopter Anti-Submarine Squadron (HS) 14. In the background are the aircraft carrier USS George Washington (CVN 73) and the Japan Maritime Self-Defense Force helicopter destroyer JS Hyuga (DDH 181). U.S. Navy photo by Mass Communication Spc. 1st Class John M. Hageman.

Specifically, the United States will work with allies and partners to continue to adapt its defense presence as necessary to maintain regional stability and assure allies of their security, including through the provision of extended deterrence to Japan and the Republic of Korea. We will augment regional deterrence and rapid response capabilities and seek opportunities to build the capacity of our Asian partners to respond more effectively to contingencies, including humanitarian crises and natural disasters.

With Japan, we will continue to implement the bilateral Realignment Roadmap agreement that will ensure a long-term presence of U.S. forces in Japan and transform Guam, the westernmost sovereign territory of the United States, into a hub for security activities in the region.

The United States will develop a more adaptive and flexible U.S. and combined force posture on the Korean Peninsula to strengthen the alliance's deterrent and defense capabilities and long-term capacity for regional and global defense cooperation. Doing so includes continuing to advance the ROK's lead role in the combined defense of its territory, together with the transition of wartime operational control to the ROK military in 2012.

We intend to improve the resiliency of U.S. forces and facilities in the region in order to safeguard and secure U.S., allied, and partner assets and interests in response to emerging anti-access and area-denial capabilities. In addition, we will explore opportunities for a more forward-deployed presence that supports increased multilateral cooperation on maritime security and enhanced capabilities for assured access to the sea, air, space, and cyberspace. For instance, the Security Framework Agreement and cooperative basing with Singapore are essential to supporting U.S. forces deployed in Asia.

Finally, the United States seeks to develop additional opportunities for joint and combined training in the Western Pacific that respond to the need for constant readiness of U.S. forces to carry out joint operations, particularly in the areas of humanitarian assistance, disaster relief, and maritime security; the scarcity of available land and facilities in the Pacific; and the potential for

leveraging U.S. engagement with allied and partner militaries to build multilateral security relationships and operational capacity among the countries of the region.

The Greater Middle East

Operations in Iraq and Afghanistan since 2001 have significantly increased the U.S. presence in the greater Middle East as well as in Central and South Asia. The urgency of these operations caused the Department to prioritize changes in defense posture needed for near-term operational capability. It is time to renew focus on a strategic architecture that better serves U.S., allied, and partner interests through the medium to long term. An emphasis on long-term relationships and shared interests with allies and partners will clarify our extended commitment to the region's security, enhance the resiliency of our defense posture, and improve our collective ability to carry out current operations while preparing for contingency response.

The United States will therefore manage a responsible force drawdown in Iraq and support an orderly transition to a more normal diplomatic and civilian presence.



Members of the Ninawa Provincial Reconstruction Team meet with the staff of the Qayara Medical Clinic in Qayara, Iraq, on Dec. 1, 2009. DoD photo by Petty Officer 2nd Class Rufus Hucks, U.S. Navy.

We will also maintain the current level of access and develop alternatives in support of operations in Afghanistan while expanding access elsewhere in the region to prepare for contingency requirements, steps that will include reducing the vulnerability of our infrastructure. Furthermore, we will ensure that our near-term investments in infrastructure and capabilities to support ongoing operations in Iraq and Afghanistan are consistent with long-term goals for the region.

Working with allies and partners, the United States will reshape its defense posture to assure partners of a credible, long-term commitment to mutual security relationships and to deter regional actors from aggression while balancing that requirement against the regional sensitivity to a large, long-term U.S. force presence. We will also support a regional security architecture focused on strengthening defense capabilities and posture networks and on advancing regional stability and security.

Africa

In Africa, the United States will continue to maintain a limited rotational military presence to help build partner security capacity, including for peacekeeping operations; generate regional security cooperation opportunities; and foster the development of constructive African civil-military relations. All such efforts to build partner capacity will pay special attention to the



Staff Sgt. Andre Amantine of 2nd Battalion, 18th Field Artillery Regiment, out of Camp Lemonnier, Djibouti, salutes Sgt. 1st Class Cary Adams during a 15-week counterterrorism course, June 16, 2009, at Camp Kasenyi, Uganda. More than 100 Ugandan soldiers graduated from this course. DoD photo by Master Sgt. Loren Bonser, U.S. Air Force.

dynamics associated with civil-military relations in host countries and will emphasize the principles of civilian control and respect for dignity, rule of law, and professionalism. The expanse of Africa and the light U.S. footprint there highlight the importance of en route infrastructure to support defense activities in theater.

The United States will work with allies and partners to enhance a defense posture that supports contingency response by improving our relationships and access agreements with African allies and partners, improving preexisting African-owned infrastructure, and exploring innovative opportunities for logistical collaboration with African militaries. We also strive to share facilities and cooperate more closely with European allies in our efforts to help African states build capacity and to prepare for contingency response.

The Western Hemisphere

Our defense objectives within the Western Hemisphere do not require a robust forward presence. We will retain a limited presence while seeking to improve relationships with regional states and militaries in pursuit of common hemispheric security goals. Our defense posture in the Western Hemisphere will support interagency capabilities to address critical issues including control of illicit trafficking, detection and interdiction of weapons of mass destruction, border and coastal security, and humanitarian assistance and disaster relief. In North America, the United States will maintain the defense posture required for mission assurance, consequence management, support for civil authorities, strategic dispersal, and homeland defense.

To mitigate the risk of a terrorist attack, accident, or natural disaster, the U.S. Navy will homeport an East Coast carrier in Mayport, Florida. We also seek to develop new cooperative partnerships and bolster current partnerships with key nations in the hemisphere, particularly in the maritime domain, and encourage closer partnerships in undertaking multilateral security initiatives.



U.S. Army Spc. Brent Nailor passes out humanitarian aid meals to women and children in Port-au-Prince, Haiti, Jan. 16, 2010. DoD photo by Fred W. Baker III.

Strengthening Interagency Partnerships

Just as maintaining America's enduring defense alliances and relationships abroad is a central facet of statecraft, so too is the need to continue improving the Department of Defense's cooperation with other U.S. departments and agencies. Years of war have proven how important it is for America's civilian agencies to possess the resources and authorities needed to operate alongside the U.S. Armed Forces during complex contingencies at home and abroad. As our experiences in Afghanistan and Iraq have shown, sustainable outcomes require civilian development and governance experts who can help build local civilian capacity. Although the U.S. military can and should have the expertise and capacity to conduct these activities, civilian leadership of humanitarian assistance, development, and governance is essential. The Department will retain capabilities designed to support civilian authorities as needed.

A strong and adequately resourced cadre of civilians organized and trained to operate alongside or in lieu of U.S. military personnel during a variety of possible contingencies is an important investment for the nation's security. This is an urgent requirement for ongoing operations in Iraq and Afghanistan, and will remain an enduring need in the future security environment—both to prevent crises and to respond to them.

America's civilian instruments of statecraft were allowed to atrophy in the post-Cold War era, and the lack of adequate civilian capacity has made prevailing in current conflicts significantly more challenging. Unfortunately, despite a growing awareness of the need and real efforts throughout the government to address it, adequate civilian capacity will take time and resources to develop and is unlikely to materialize in the near term. The Department will therefore continue to work with the leadership of civilian agencies to support the agencies' growth and their operations in the field, so that the appropriate military and civilian resources are put forth to meet the demands of current contingencies. The Department will continue to build on the

lessons learned from examples such as the Provincial Reconstruction Teams in Afghanistan and Iraq, and work toward improving a whole-of-government approach.

Just as the U.S. military is not the most appropriate institution to lead capacity-building efforts to enhance civilian institutions overseas, so the Department of Defense should likewise act in support of civil authorities here at home. The Department of Defense supports the Department of Homeland Security, and other federal civilian agencies, as part of a whole-of-government, whole-of-nation approach to both domestic security and domestic incident response. It is essential that DoD improve its capabilities for contributing to civilian-led activities and operations, supporting “unity of effort” in homeland security. The Department continues to work closely with its interagency partners, in particular the Department of Homeland Security, to build capacity vertically from the federal level down to the local level, and horizontally across the federal government. DoD also values its engagement with stakeholders in the private sector, with nonprofit organizations, and with other elements of the public.

As part of this effort to build capacity at the national level, the Department seeks to develop a more comprehensive approach to assessing its own preparedness capabilities and to contribute to the development of domestic capabilities across the interagency. Developing an integrated strategy for DoD preparedness would better align ongoing DoD efforts with broader initiatives by interagency partners now under way.



U.S. Airmen assigned to the 304th Rescue Squadron, Portland Air National Guard Base, Ore., talk wearing gas masks before entering an area to recover simulated injured civilians during an exercise simulating the detonation of a “dirty bomb” near Portland. U.S. Air Force photo by Senior Airman John Hughel.

While national consequence management plans and capabilities have been significantly improved in recent years, plans and policies focused on preventing imminent events inside the United States are less well developed. On a daily basis, federal, state, and local authorities are together engaged in a wide range of ongoing prevention activities, and these regular interactions are very effective. It is less clear how these different organizations will and

should interact if there are strong and credible indications of an imminent attack about which little is known. The Department of Defense plans to work closely with its interagency partners to better understand the challenges associated with preventing future attacks, including clarifying

federal roles and responsibilities as well as identifying what additional technical capabilities may be needed, particularly in the areas of wide-area search, interdiction, and attribution of attacks.

Finally, the Department of Defense will continue to advocate for an improved interagency strategic planning process that makes optimal use of all national instruments of statecraft. The complexity of 21st century conflicts demands that the U.S. government significantly improve interagency comprehensive assessments, analysis, planning, and execution for whole-of-government operations, including systems to monitor and evaluate those operations in order to advance U.S. national interests. One solution is to allocate additional resources across the government and fully implement the National Security Professional (NSP) program to improve cross-agency training, education, and professional experience opportunities. This will help foster a common approach to strategic and operational planning and implementation, improving prospects for success in future contingencies.

REFORMING HOW WE DO BUSINESS

A centerpiece of this defense strategy is its focus on reforming how the Department operates. Our operations in Iraq and Afghanistan and the projections of a complex future environment demand more agile, innovative, and streamlined processes and institutions. As past administrations have learned, successful reform in these areas is difficult, and ongoing efforts are at different stages of maturity. The Department's persistence in these areas over the next several years will be critical to prevent reversion to old ways of doing business—approaches that inhibit our forces in the field. The QDR focused on four specific issues where reform is imperative: security assistance, defense acquisition, the defense industrial base, and energy security and climate change.

Reforming Security Assistance

U.S. security is inextricably tied to the effectiveness of our efforts to help partners and allies build their own security capacity. The value of programs to build partner capacity extends well beyond conflicts such as Afghanistan and Iraq—indeed, as outlined earlier in the report, conducting such efforts before conflicts become serious can help mitigate them or even prevent them in the first place. Despite an increased emphasis on the capacity-building mission over the past few years, America's efforts remain



U.S. Army Capt. Michael Harrison and Pakistani army Capt. Fahad discuss continued cooperation and information sharing along the Nawa Pass, a border separating Afghanistan's Kunar province and Pakistan's Federally Administered Tribal Areas. U.S. Army photo by Sgt. Matthew C. Moeller.

constrained by a complex patchwork of authorities, persistent shortfalls in resources, unwieldy processes, and a limited ability to sustain such undertakings beyond a short period.

Although security assistance is not new, what has fundamentally changed is the role that such assistance can play in providing security in today's environment. Threats to our security in the decades to come are more likely to emanate from state weakness than from state strength. The future strategic landscape will increasingly feature challenges in the ambiguous gray area that is neither fully war nor fully peace. In such an environment, enabling our partners to respond to security challenges may reduce risk to U.S. forces and extends security to areas we cannot reach alone.

In part because our security assistance architecture was designed to support long-term relationships to help resist a Cold War adversary, processes for making decisions and getting resources to the field can take months or—more often—years. As a result, there has been constant pressure to develop special legislative and procedural workarounds. We have an enduring need to build future coalitions and help partners address their own indigenous challenges, and we need the right tools positioned beforehand rather than having to respond from scratch to each contingency or systemic failure. We have historically underinvested in these capabilities; now is the time to build on lessons learned and institutionalize them to better position the United States for a complex future.

Many of our authorities and structures assume a neat divide between defense, diplomacy, and development that simply does not exist. For example, well-trained security forces are of limited utility, or indeed can even be counterproductive, without the institutional systems and processes to sustain them or the governance and regulatory frameworks to hold them accountable to civilian oversight and the rule of law. We have gained a new appreciation of the security sector—which includes the defense and criminal justice sectors, government management and oversight bodies, and civil society—as a system of systems that demands interagency partnerships. Developing the security sector requires comprehensive, whole-of-government programs and activities, but the current patchwork of authorities incentivizes piecemeal, stovepiped approaches. Solving this problem will require the recognition within our government that security is a shared responsibility and that our programs and processes must reflect that reality.

Many adjustments to improve security sector assistance have been limited in scope, duration, and resources. As a result, the combatant commanders lack sufficient tools to support their theater campaign plans and their assigned mission to build partner capacity. These missions may require DoD to play a lead or supporting role, in coordination with relevant U.S. civilian agencies, and may range from the wholesale reconstitution of security forces within a major stability operation, to fulfilling urgent train-and-equip requirements for a partner confronting serious security challenges, to supporting civilian agencies in the rebuilding of a state's capacity to deliver essential services to vulnerable populations and provide access to justice.

The United States has developed some important tools to meet many of its most pressing needs, and is taking steps to lay the groundwork for additional reforms. In 2009, the Administration worked with Congress to create the Pakistan Counterinsurgency Fund and extend Section 1206 “Global Train-and-Equip” authority to support coalition operations—facilitating increased contributions to Afghanistan. The Department is also pursuing efforts to build the ministerial capacity of partners in order to sustain their operational investments.

Equally significant, the Administration has in the past year initiated a comprehensive review of security sector assistance, overseen by the National Security Council. This review will identify

and elevate security assistance issues for senior leadership, and it will examine related roles, missions, authorities, and resources.

The Department of Defense continues to make key internal adjustments as well. The Defense Security Cooperation Agency has launched a global review of security cooperation manning to ensure that our manpower reflects requirements. The Department is taking steps to improve the process of implementing foreign military sales to make the requirements, definition, and procurement processes more efficient. The Military Departments have made strides toward improving doctrine, education, and training for U.S. service personnel engaged in these activities.

But we can and must do more. The Department is also exploring how to make changes to our personnel, organizations, and processes to develop and track qualified personnel for capacity-building activities, and develop critical enablers such as language, regional, and cultural skills. We are also reviewing our organizations and processes, identifying the capabilities necessary to improve how requirements are defined and to determine the balance of such capabilities required both at the combatant commands and in supporting DoD organizations.

The Department will continue to work with its interagency partners and with Congress in developing new and innovative approaches to reforming security sector assistance. Some warfighter needs are urgent, and meeting them should proceed alongside broader reform efforts. Of particular importance are the Commander's Emergency Response Program, the Iraq Security Forces Fund, and the Afghanistan Security Forces Fund, whose continued funding is critical to success in Iraq and Afghanistan. To enhance flexibility, the Department's Global Train-and-Equip authority has now been extended to coalition activities. Further, to avoid procurement and contracting delays, the Department will take steps to establish a Defense Coalition Acquisition Fund, which would allow the U.S. government to maintain an inventory of items commonly needed by partners. The Department will also seek authority to expedite support services for the provision of training and equipment—accelerating and improving the delivery of equipment to partners—when it is in our national security interest to do so.

Preventing conflict, stabilizing crises, and building security sector capacity are essential elements of America's national security approach. Success in convincing partners to pursue shared national security objectives, often at great political and physical risks, ultimately depends on proving that the United States is a reliable partner. We must recognize that security sector assistance is a resource-intensive mission that requires focused, efficient, and predictable funding as well as adequate authorities to provide the right assistance at the right time to the right people.

Reforming How We Buy

Another pressing institutional challenge facing the Department is acquisitions—broadly speaking, how we acquire goods and services and manage the taxpayers' money. Today, the

Department's obligation to defend and advance America's national interests by, in part, exercising prudent financial stewardship continues to be encumbered by a small set of expensive weapons programs with unrealistic requirements, cost and schedule overruns, and unacceptable performance.

Over several decades and across multiple administrations, the Pentagon's acquisition system has developed four major problems that hamper our ability to acquire critical platforms and capabilities in a timely manner and at acceptable cost.

First, the requirements for new systems are too often set at the far limit of current technological boundaries. Such ambition can sometimes help produce breakthrough developments that can significantly extend America's technological edge. But far too often the result is disappointing initial performance followed by chronic cost and schedule overruns. The Department and the nation can no longer afford the quixotic pursuit of high-tech perfection that incurs unacceptable cost and risk. Nor can the Department afford to chase requirements that shift or continue to increase throughout a program's life cycle.

Second, the Pentagon's acquisition workforce has been allowed to atrophy, exacerbating a decline in the critical skills necessary for effective oversight. For example, over the past ten years, the Department's contractual obligations have nearly tripled while our acquisition workforce fell by more than 10 percent. The Department also has great difficulty hiring qualified senior acquisition officials. Over the past eight years the Department has operated with vacancies in key acquisition positions averaging from 13 percent in the Army to 43 percent in the Air Force. There remains an urgent need for technically trained personnel—cost estimators, systems engineers, and acquisition managers—to conduct effective oversight.

Third, our system of defining requirements and developing capability too often encourages reliance on overly optimistic cost estimates. In order for the Pentagon to produce weapons systems efficiently, it is critical to have budget stability—but it is impossible to attain such stability in DoD's modernization budgets if we continue to underestimate the cost of such systems from the start. We must demand cost, schedule, and performance realism in our acquisition process, and hold industry and ourselves accountable. We must also ensure that only essential systems are procured, particularly in a resource-constrained environment. There are too many programs under way. We cannot afford everything we might desire; therefore, in the future, the Department must balance capability portfolios to better align with budget constraints and operational needs, based on priorities assigned to warfighter capabilities.

Fourth, effective and efficient delivery of logistical support to our men and women in the field is an enduring priority and an area where continued improvements must be made. DoD is working to improve the integration of joint logistics to provide operational commanders with the flexibility and sustainability required to better support unity of effort within the joint force and

between multinational, interagency, and nongovernmental elements. Wartime innovations in logistics rules, tools, and processes have helped support high levels of long-term deployments, and has enhanced operational freedom of action. The combatant commanders and military departments are integrating operational contract support (OCS) into the adaptive planning process and institutionalizing common operational contracting approaches



Secretary of Defense Robert M. Gates meets with plant workers during a tour of an aircraft production facility in Fort Worth, Tex., on Aug. 31, 2009. DoD photo by Cherie Cullen.

to provide more responsive support for current operations and pre-planned, rapidly deployable contracted support for future contingencies. U.S. Transportation Command is spearheading efforts to improve distribution service levels across the full spectrum of operations in order both to improve end-to-end supply chain velocity and to reduce supply chain costs, ultimately providing better support for our people in harm's way.

To help in overcoming these challenges and to institutionalize ongoing innovations, President Obama signed the Weapon Systems Acquisition Reform Act (WSARA) into law on May 22, 2009. The goal of this important new statute is to improve acquisition outcomes in the Department, with specific emphasis on major defense acquisition programs (MDAPs) and major automated information systems (MAISs). In signing the act, the President stated that the legislation is designed to “limit cost overruns before they spiral out of control. It will strengthen oversight and accountability by appointing officials who will be charged with closely monitoring the weapons systems that we’re purchasing to ensure that costs are controlled.” The law also will substantially improve the oversight of major weapons acquisition programs, while helping to put MDAPs on a sound footing from the outset by addressing program shortcomings in the early phases of the acquisition process. To achieve these goals and to improve how we acquire and field critical capabilities for today’s wars and tomorrow’s challenges, the Department is undertaking a far-reaching set of reforms.

Developing our people: To operate effectively, the acquisition system must be supported by an appropriately sized cadre of acquisition professionals with the right skills and training to successfully perform their jobs. To address personnel deficiencies, we will increase the number of acquisition personnel by 20,000 positions by 2015. We will continue to significantly enhance

training and retention programs in order to bolster the capability and size of the acquisition workforce.

Ensuring integrity in the acquisition process: Since early decisions and estimates greatly influence a program's eventual success or failure, the Department is focusing on strengthening the front end of the acquisition process. We will ensure that all major programs are subjected to an early and clear definition of approved requirements based on a rigorous assessment of alternatives. To reduce technical risk, we will conduct a comprehensive design review, including independent reviews, to certify that the technologies involved are sufficiently mature before any program can progress to the costly final phase—engineering and manufacturing development. We will use competitive prototypes, when doing so is cost-effective and in the interest of national security objectives. As we subject our acquisition process to more rigorous assessment, we must be mindful that in some cases the Department must accept some risk in order to field a capability that is needed for ongoing operations in Afghanistan, Iraq, or elsewhere.

Bolstering cost analysis: The Department is undertaking several initiatives to strengthen our cost analysis capabilities in line with the goals of recent legislation. We are increasing our reliance on independent analyses in order to ensure that decisions on acquisition and logistics programs are based on the most realistic cost estimates possible. We are expanding the Department's independent cost assessment capabilities and are modernizing the cost and price analysis training that DoD personnel receive. To strengthen our cost databases and make costs more visible, we are improving contractor data reporting of actual costs, early systems engineering and development planning, earned value management, and pricing information. The more robust data gleaned from contractor reports will enable more continuous monitoring of program execution and facilitate improvements in the requirements-establishment and contracting processes of the Department. Finally, we will improve the transparency of cost estimates, establish a more rigorous quality assurance program, and report annually to Congress on the Department's cost-estimating activities.

Improving program execution: Beyond ensuring that acquisition efforts begin on the right track, the Department must also continue to strengthen the execution phase of weapons development programs by pursuing several avenues:

- Begin to employ fixed-price development contracts more frequently when appropriate.
- Constrain the tendency to add requirements to programs by employing the Configuration Steering Boards previously endorsed by Congress.
- Demonstrate critical technologies and prove concepts by creating competitive prototypes prior to initiating engineering and manufacturing development.

- Certify technology maturity through independent reviews and technology readiness assessments.
- Develop more accurate technical baselines by applying disciplined systems engineering throughout the life cycle.
- Conduct realistic integrated testing to identify system problems as early as possible. When necessary, so as not to slow the fielding of urgently needed systems, the Department will conduct fielding in parallel with testing to assess safety and identify system capabilities and limitations.
- Better align profitability with performance by linking contract fee structures with contractor performance, rigorously examining service-based contracts to ensure that fees are properly earned, eliminating the use of no-bid contracts whenever possible, and ensuring that multiyear contracts are limited to instances in which real, substantial savings are accrued to the taxpayer.
- Achieve effective life cycle cost management by employing readiness-based sustainment strategies, facilitated by stable and robust government-industry partnerships.

In short, we need to match requirements with mature technologies, maintain a disciplined systems engineering approach, integrated with comprehensive testing, and avoid sacrificing cost and schedule for promises of improved performance.

Lowering military health systems cost: The Department spends about \$50 billion annually for health care for active duty personnel, their dependents, and retirees. More than half of this care is bought from the private sector. In addition, supplies and medical equipment are purchased from the private sector to support military treatment facilities and deployed medical forces around the world. DoD continues to review the costs of providing health care in an effort to identify efficiencies that can reduce cost growth while sustaining high-quality care. Such efficiencies include the following:

- Implementing targeted initiatives to recover overpayments and fraudulent, abusive, or wasteful payments from healthcare providers.
- Standardizing medical/surgical supply chains. The Department should develop and implement leading private-sector supply chain processes to obtain the best medical products at the best prices.

In addition to the health care efficiencies identified above, the Department intends to continue to develop health care initiatives for the 2012 Program Review that will improve the quality and standard of care, while reducing growth in overall costs. These initiatives will be fully aligned with the military health system's "Quadruple Aim"—a simultaneous balance of increased

readiness, improved health of the population we serve, enhanced patient experience of care (including quality, access, and reliability), and responsibly managed per capita cost of care—as described in the *Military Health System Strategic Plan*.

In sum, the Department must work to further reform how it does business and eliminate those challenges that hinder our success: a risk-averse culture, a litigious process, parochial interests, excessive and changing requirements, unnecessary budget churn and instability, and sometimes adversarial relationships within the Pentagon and with other parts of the government. We will continue to work within the Department and with Congress to improve our acquisition and procurement processes in order to better meet our obligation to be good stewards of the All-Volunteer Force and of the investments that all Americans make to ensure our common defense.

Institutionalizing Rapid Acquisition Capability

America's current and future adversaries will make innovative use of readily available emerging and commercial technologies and employ asymmetric tactics to disrupt the superiority of U.S. military power. The QDR outlines a number of enhancements to rebalance the force consistent with defense priorities and to better prepare our forces for the challenges ahead.



U.S. Navy Petty Officer 3rd Class Tyreek Hayward lays coil to rewind a motor in the machine shop aboard the aircraft carrier USS Nimitz in the Gulf of Oman, Nov. 9, 2009. U.S. Navy photo by Seaman Robert Winn.

The Department must not only prepare for those threats we can anticipate, but also build the agile, adaptive and innovative structures capable of quickly identifying emerging gaps and adjusting program and budgetary priorities to rapidly field capabilities that will mitigate those gaps.

Reforming how we buy the goods and services that will enable U.S. forces to succeed is critical, but acquisition is only part of the process that delivers urgently needed capability to the field. The ability to quickly respond to urgent needs involves three main components: deciding what you need (requirements), providing adequate resources to buy it (programming and budgeting), and assessing alternatives and executing a solution (acquisition). In addition to acquisition improvements, the Department needs a means to quickly prioritize and quantify requirements and to ensure that the resources are available to enable rapid fielding of capabilities inside of the Department's Planning Programming, Budgeting and Execution System (PPBES) cycle. All components must ensure

that throughout the process, appropriate priority is placed on delivering timely and sufficient capabilities to meet the urgent needs of operational commanders.

To prepare the Department for the complex threats that will surely emerge in the future, we need to make our “deliberate” processes more agile and capable of responding to urgent needs. During periods of conflict, in the traditional risk areas of cost, schedule, and performance, “schedule” often becomes the least acceptable risk.

Through robust analysis employing a variety of approaches, our research and development community must continually assess the threat of emerging and commercially available technology and ensure that our technology needed to counter these threats is mature before they materialize in a disruptive way.

Strengthening the Industrial Base

In order for the Department of Defense to develop, field, and maintain high-quality equipment, it must rely on a robust and capable defense industry. Indeed, America’s industrial capacity and capability made victory in World War II possible, maintained the technological edge against the Soviet Union, and today helps ensure that our military personnel in harm’s way have the world’s best equipment and are supported by modern logistics and information systems; thus our technological advantage must be closely monitored and nurtured.

Unfortunately, the federal government as a whole and the Pentagon in particular have not adequately addressed the changes both within the industry and in the Department’s needs in the current strategic environment. The result has been that America’s defense industry has consolidated and contracted around 20th-century platforms rather than developing the broad and flexible portfolio of systems that today’s security environment demands.

Remedying the outdated—for decades, largely hands-off—attitude toward the U.S. defense industrial base cannot be done quickly, and change will require a long-term approach undertaken in partnership with industry and Congress. The range of products and services on which our forces depend requires that the Department develop a more sophisticated relationship with the industrial base, one that takes into account the rapid evolution of commercial technology, as well as the unique requirements of the Department.

Whenever possible and appropriate, the Department will rely on market forces to create, shape, and sustain industrial and technological capabilities, but we must be prepared to intervene when absolutely necessary to create and/or sustain competition, innovation, and essential industrial capabilities.

For too long the defense industry has been viewed as a monolithic sector of the economy whose key players are made up of only the select few that are established military industrial providers.

This simply is not true. The goods and services on which the Department relies reach far more deeply into the overall U.S. economy. Although some unique items are produced solely for the Department, these items themselves often rely on a complex and integrated supply chain of product providers that, if strained at the second, third, and even fourth tiers, would jeopardize the ability of even the seemingly pure military industrial providers to continue to support our forces.

Many of the defense industries' jobs that require the most irreplaceable skills reside within non-prime suppliers. Many of these small, highly specialized companies depend on the major suppliers and their unique requirements for their very survival. The cascading effects on them of decisions that the Department makes at the overall programmatic level must be better understood—to ensure that critical lower-tier providers have the capacity to respond to these decisions, to ensure the continued supply of critical subcomponents to our defense industrial base, to ensure that critical skills are not lost, and to protect our national security from the risk of using compromised supply chains.

Moreover, the financial community has an important, and often overlooked, role to play in maintaining the health of our industrial base. From the small technology start-ups that seek venture funding to pursue new products and systems, to the debt markets that provide capital support as programs mature and evolve, the Department must ensure that we do not take this access to capital for granted and must work to form a more transparent view of our requirements and long-term investment plans.

Likewise, although innovations unique to national security often occur within the “pure-play” defense industrial base, the vast majority of innovative and revolutionary components, systems, and approaches that enable and sustain our technological advantage reside in the commercial marketplace, in small defense companies, or in America's universities.

Therefore, the Department will work to establish requirements and pursue specific programs that take full advantage of the entire spectrum of the industrial base at our disposal: defense firms, purely commercial firms, and the increasingly important sector of those innovative and technologically advanced firms and institutions that fall somewhere in between.

The Department will also work to adopt a more integrated approach that can improve our ability to identify potential single points of failure or concern earlier in the acquisition process, and will establish a more comprehensive and, when appropriate, interagency approach to industrial policy and industrial base issues.

Our engagement with industry does not mean the Department of Defense will underwrite sunset industries or prop up poor business models. It does mean that the Department will create an

environment in which our industries, a foundation of our nation's strength, can thrive and compete in the global marketplace.

As we take steps to revitalize our defense industrial base, we also recognize the value of our allies and their defense industrial capacities. We will continue to value our allies' capabilities, ensure that when they bid on U.S. contracts that they are treated fairly, just as we expect our firms to be treated fairly in international competitions, and deepen our collaborative effort to innovate against 21st century threats.

In order for the defense industry to remain a source of strategic advantage well into the future, the Department and our nation require a consistent, realistic, and long-term strategy for shaping the structure and capabilities of the defense industrial base. Toward this end, the Department is committed to being more forward leaning in its ongoing assessments of the industrial base—refocusing our efforts on our future needs, not just our past performance; working much more closely with the Services to foster an integrated approach to the overall industrial base; and placing transparency and dialogue with industry at the forefront of our agenda.

Reforming the U.S. Export Control System

Today's export control system is a relic of the Cold War and must be adapted to address current threats. The current system impedes cooperation, technology sharing, and interoperability with allies and partners. It does not allow for adequate enforcement mechanisms to detect export violations, or penalties to deter such abuses. Moreover, our overly complicated system results in significant interagency delays that hinder U.S. industrial competitiveness and cooperation with allies.

The United States has made continuous incremental improvements to its export control system, particularly in adding controls against the proliferation of weapons of mass destruction and their means of delivery. The United States has also been a leader in international export controls, creating and improving the multilateral regimes made up of U.S. allies and trading partners that control what is exported to countries of concern to the United States. The regimes also have become a global control standard via United Nations Security Council resolutions. They help ensure that key technologies and items available in numerous countries are controlled in order to prevent their acquisition by actors who would use them contrary to U.S. and allied interests.

However, the current system is largely out-dated. It was designed when the U.S. economy was largely self-sufficient in developing technologies and when we controlled the manufacture of items from these technologies for national security reasons. Much of the system protected an extensive list of unique technologies and items that, if used in the development or production of weapons by the former Soviet Union, would pose a national security threat to the United States.

The global economy has changed, with many countries now possessing advanced research, development, and manufacturing capabilities. Moreover, many advanced technologies are no longer predominantly developed for military applications with eventual transition to commercial uses, but follow the exact opposite course. Yet, in the name of controlling the technologies used in the production of advanced conventional weapons, our system continues to place checks on many that are widely available and remains designed to control such items as if Cold War economic and military-to-commercial models continued to apply.

The U.S. export system itself poses a potential national security risk. Its structure is overly complicated, contains too many redundancies, and tries to protect too much. Today's export control system encourages foreign customers to seek foreign suppliers and U.S. companies to seek foreign partners not subject to U.S. export controls. Furthermore, the U.S. government is not adequately focused on protecting those key technologies and items that should be protected and ensuring that potential adversaries do not obtain technical data crucial for the production of sophisticated weapons systems.

These deficiencies can be solved only through fundamental reform. The President has therefore directed a comprehensive review tasked with identifying reforms to enhance U.S. national security, foreign policy, and economic security interests. Reform efforts must reflect an inherently interagency process as current export control authorities rest with other departments. Similarly, meaningful reforms will not be possible without congressional involvement throughout the process. The Department of Defense has a vital stake in fundamental reform of export controls, and will work with our interagency partners and Congress to ensure that a new system fully addresses the threats that the United States will face in the future.

Crafting a Strategic Approach to Climate and Energy

Climate change and energy are two key issues that will play a significant role in shaping the future security environment. Although they produce distinct types of challenges, climate change, energy security, and economic stability are inextricably linked. The actions that the Department takes now can prepare us to respond effectively to these challenges in the near term and in the future.

Climate change will affect DoD in two broad ways. First, climate change will shape the operating environment, roles, and missions that we undertake. The U.S. Global Change Research Program, composed of 13 federal agencies, reported in 2009 that climate-related changes are already being observed in every region of the world, including the United States and its coastal waters. Among these physical changes are increases in heavy downpours, rising temperature and sea level, rapidly retreating glaciers, thawing permafrost, lengthening growing seasons, lengthening ice-free seasons in the oceans and on lakes and rivers, earlier snowmelt, and alterations in river flows.

Assessments conducted by the intelligence community indicate that climate change could have significant geopolitical impacts around the world, contributing to poverty, environmental degradation, and the further weakening of fragile governments. Climate change will contribute to food and water scarcity, will increase the spread of disease, and may spur or exacerbate mass migration.

While climate change alone does not cause conflict, it may act as an accelerant of instability or conflict, placing a burden to respond on civilian institutions and militaries around the world. In addition, extreme weather events may lead to increased demands for defense support to civil authorities for humanitarian assistance or disaster response both within the United States and overseas. In some nations, the military is the only institution with the capacity to respond to a large-scale natural disaster. Proactive engagement with these countries can help build their capability to respond to such events. Working closely with relevant U.S. departments and agencies, DoD has undertaken environmental security cooperative initiatives with foreign militaries that represent a nonthreatening way of building trust, sharing best practices on installations management and operations, and developing response capacity.

Second, DoD will need to adjust to the impacts of climate change on our facilities and military capabilities. The Department already provides environmental stewardship at hundreds of DoD installations throughout the United States and around the world, working diligently to meet resource efficiency and sustainability goals as set by relevant laws and executive orders. Although the United States has significant capacity to adapt to climate change, it will pose challenges for civil society



At Fort Carson, Colo., the Army partnered with a local energy provider in an enhanced-use lease. The energy provider built a photovoltaic solar array on top of a closed landfill. That site now provides energy to some 540 homes. U.S. Army photo.

and DoD alike, particularly in light of the nation's extensive coastal infrastructure. In 2008, the National Intelligence Council judged that more than 30 U.S. military installations were already facing elevated levels of risk from rising sea levels. DoD's operational readiness hinges on continued access to land, air, and sea training and test space. Consequently, the Department must complete a comprehensive assessment of all installations to assess the potential impacts of climate change on its missions and adapt as required.

In this regard, DoD will work to foster efforts to assess, adapt to, and mitigate the impacts of climate change. Domestically, the Department will leverage the Strategic Environmental Research and Development Program, a joint effort among DoD, the Department of Energy, and the Environmental Protection Agency, to develop climate change assessment tools. Abroad, the Department will increase its investment in the Defense Environmental International Cooperation Program not only to promote cooperation on environmental security issues, but also to augment international adaptation efforts. The Department will also speed innovative energy and conservation technologies from laboratories to military end users. The Environmental Security and Technology Certification Program uses military installations as a test bed to demonstrate and create a market for innovative energy efficiency and renewable energy technologies coming out of the private sector and DoD and Department of Energy laboratories. Finally, the Department is improving small-scale energy efficiency and renewable energy projects at military installations through our Energy Conservation Investment Program.



Personnel from the University of Washington's Applied Physics Laboratory prepare to recover a torpedo from under the ice on March 20, 2009. DoD photo by Mass Communication Spec. First Class Tiffini M. Jones, U.S. Navy.

The effect of changing climate on the Department's operating environment is evident in the maritime commons of the Arctic. The opening of the Arctic waters in the decades ahead which will permit seasonal commerce and transit presents a unique opportunity to work collaboratively in multilateral forums to promote a balanced approach to improving human and environmental security in the region. In that effort, DoD must work with the Coast Guard and the Department of Homeland Security to address gaps in Arctic

communications, domain awareness, search and rescue, and environmental observation and forecasting capabilities to support both current and future planning and operations. To support cooperative engagement in the Arctic, DoD strongly supports accession to the United Nations Convention on the Law of the Sea.

As climate science advances, the Department will regularly reevaluate climate change risks and opportunities in order to develop policies and plans to manage its effects on the Department's operating environment, missions, and facilities. Managing the national security effects of climate

change will require DoD to work collaboratively, through a whole-of-government approach, with both traditional allies and new partners.

Energy security for the Department means having assured access to reliable supplies of energy and the ability to protect and deliver sufficient energy to meet operational needs. Energy efficiency can serve as a force multiplier, because it increases the range and endurance of forces in the field and can reduce the number of combat forces diverted to protect energy supply lines, which are vulnerable to both asymmetric and conventional attacks and disruptions. DoD must incorporate geostrategic and operational energy considerations into force planning, requirements development, and acquisition processes. To address these challenges, DoD will fully implement the statutory requirement for the energy efficiency Key Performance Parameter and fully burdened cost of fuel set forth in the 2009 National Defense Authorization Act. The Department will also investigate alternative concepts for improving operational energy use, including the creation of an innovation fund administered by the new Director of Operational Energy to enable components to compete for funding on projects that advance integrated energy solutions.

The Department is increasing its use of renewable energy supplies and reducing energy demand to improve operational effectiveness, reduce greenhouse gas emissions in support of U.S. climate change initiatives, and protect the Department from energy price fluctuations. The Military Departments have invested in noncarbon power sources such as solar, wind, geothermal, and biomass energy at domestic installations and in vehicles powered by alternative fuels, including hybrid power, electricity, hydrogen, and compressed natural gas. Solving military challenges—through such innovations as more efficient generators, better batteries, lighter materials, and tactically deployed energy sources—has the potential to yield spin-off technologies that benefit the civilian community as well. DoD will partner with academia, other U.S. agencies, and international partners to research, develop, test, and evaluate new sustainable energy technologies.

Indeed, the following examples demonstrate the broad range of Service energy innovations. By 2016, the Air Force will be postured to cost-competitively acquire 50 percent of its domestic aviation fuel via an alternative fuel blend that is greener than conventional petroleum fuel. Further, Air Force testing and standard-setting in this arena paves the way for the much larger commercial aviation sector to follow. The Army is in the midst of a significant transformation of its fleet of 70,000 non-tactical vehicles (NTVs), including the current deployment of more than 500 hybrids and the acquisition of 4,000 low-speed electric vehicles at domestic installations to help cut fossil fuel usage. The Army is also exploring ways to exploit the opportunities for renewable power generation to support operational needs: for instance, the Rucksack Enhanced Portable Power System (REPPS). The Navy commissioned the USS *Makin Island*, its first electric-drive surface combatant, and tested an F/A-18 engine on camelina-based

biofuel in 2009—two key steps toward the vision of deploying a “green” carrier strike group using biofuel and nuclear power by 2016. The Marine Corps has created an Expeditionary Energy Office to address operational energy risk, and its Energy Assessment Team has identified ways to achieve efficiencies in today’s highly energy-intensive operations in Afghanistan and Iraq in order to reduce logistics and related force protection requirements.

To address energy security while simultaneously enhancing mission assurance at domestic facilities, the Department is focusing on making them more resilient. U.S. forces at home and abroad rely on support from installations in the United States. DoD will conduct a coordinated energy assessment, prioritize critical assets, and promote investments in energy efficiency to ensure that critical installations are adequately prepared for prolonged outages caused by natural disasters, accidents, or attacks. At the same time, the Department will also take steps to balance energy production and transmission with the requirement to preserve the test and training ranges and the operating areas that are needed to maintain readiness.

A DEFENSE RISK MANAGEMENT FRAMEWORK

The depth, scope, and scale of activities that the Department of Defense undertakes every day are unparalleled. From employing forces in operations around the world, to providing education, health care, and housing for our people, to researching, developing, testing, and fielding new technologies, the Department has a unique set of global responsibilities.

As described earlier, defense strategy requires making choices: accepting and managing risk is thus inherent in everything the Department does. Although difficult, risk management is central to effective decision-making and is vital to our success. For our nation, it can mean the difference between victory and defeat; for our men and women in uniform and their families, such decisions have life-and-death consequences. That is why the Department is focused so centrally on rebalancing our capabilities and reforming our institutions to better enable success in today's wars while preparing for a wide range of contingencies.

Effectively managing risk across such a vast enterprise is difficult; the range and volume of component activities and competencies defy simple identification, categorization, and aggregation of risk. Moreover, a dynamic security environment requires the Department to be flexible and diminishes the value of formulaic risk assessments. Taken together, the challenges associated with measuring risk and performance relegate the use of quantitative metrics to an important but supporting role: in any risk assessment, DoD necessarily places a premium on informed judgment at all echelons of command.

In assessing risk for this QDR, the Department used a multidisciplinary approach. The assessment reflects updated thinking on best practices, which increasingly not only draws on quantitative analysis, but also relies on informed judgments, expert opinions, and the use of scenarios. The Department ensured that its risk assessment was strategy driven. Our efforts were informed by recent risk identification efforts conducted by various components of the Department, including the DoD Inspector General and by the Government Accountability Office.⁵

⁵ The GAO produces an annual list of high-risk management issues in the U.S. government, and in 2009 eight applied to DoD: supply chain management, weapon systems acquisition, contract management, financial management, business systems modernization, support infrastructure management, approach to business transformation, and the Personnel Security Clearance Program. The DoD Inspector General summary of management and performance challenges for FY 2009 also identified eight risk areas for the Department: financial management; acquisition process and contract management; joint warfighting and readiness; information assurance, security, and privacy; health care; equipping and training Iraqi and Afghan security forces; the nuclear enterprise; and the American Recovery and Reinvestment Act.

As a framework to organize its assessment, the 2010 QDR used risk categories, described below, that have been employed since 2001:

- *Operational risk*: the ability of the current force to execute strategy successfully within acceptable human, materiel, financial, and strategic costs. Consideration of operational risk requires assessing the Department's ability to execute current, planned, and contingency operations in the near term.
- *Force management risk*: our ability to recruit, retain, train, educate, and equip the All-Volunteer Force, and to sustain its readiness and morale. This requires the Department to examine its ability to provide trained and ready personnel in the near term, midterm, and long term.
- *Institutional risk*: the capacity of management and business practices to plan for, enable, and support the execution of DoD missions. It encompasses the ability to develop effective and efficient organizations and processes over the near term, midterm, and long term.
- *Future challenges risk*: the Department's capacity to execute future missions successfully, and to hedge against shocks. Here most consideration is given to the Department's ability to field superior capabilities and sufficient capacity to deter/defeat emerging threats in the midterm and long term.

Ongoing efforts to rebalance the joint force, including those taken during the course of this QDR, help better position DoD not only to prevail across a range of missions but to do so in the challenging current and likely future security environment. However, existing and emerging issues could complicate the Department's ability to execute the defense strategy. Therefore, on the basis of an enterprise-wide review, this QDR risk assessment identifies those key shortfalls or complex problems that threaten the Department's ability to successfully execute its priority objectives, and that consequently require the sustained attention of DoD's senior leadership.

Operational Risk

Key issues that pose risk to operational missions in the near term include providing sufficient enabling capabilities, building partnership capacity, and securing DoD systems in cyberspace.

A failure to provide sufficient enablers would constrain ongoing operations in multiple ways and would constitute particular risk to achieving the near-term goals of prevailing in Afghanistan and Iraq. Key capability enablers are currently stressed and will remain so in the near- to midterm environment because they play a critical and potentially growing role in ongoing operations. Examples detailed previously include intelligence, surveillance, and reconnaissance (ISR), vertical lift and associated logistics assets, electronic warfare, and language and culture skills, along with

special operations forces enablers. DoD continues to work toward filling persistent gaps. Drawing on the results of the QDR's analysis, the Department has identified enabling capabilities that are useful in a wide range of operations and intends to make continued investments in them. But despite these efforts to reduce stress on enablers across the FYDP, this risk could worsen over time given the projected demands in the future security environment.

Allies and both international and interagency partners are critical to success in meeting today's security challenges. Overseas, the inability or unwillingness of international partners to support shared goals or provide access would place additional operational risk on U.S. forces and would threaten our ability to prevail in current or future conflicts. Building the defense capacity of allies

and partners and ensuring that the U.S. Armed Forces are able to effectively train and operate with foreign militaries is a high-priority mission. As the emphasis on developing the capability of indigenous security forces in Afghanistan and Iraq reflects, conducting security force assistance (SFA) operations is an increasingly critical element of building partnership capacity. In anticipation of the growing role of security force assistance in U.S. strategy and operations, the Department is institutionalizing general purpose force capabilities for security force



U.S. Navy Chief Explosive Ordnance Disposal Technician Kenneth Simpson, right, discusses disposal techniques with Philippine Chief Inspector Eric Maniego, with the National Police Maritime Group Special Reaction Unit, at Crow Valley, Philippines, March 25, 2009. U.S. Navy photo by Mass Communication Spec. 2nd Class Aaron Burden.

assistance; enhancing language, regional, and cultural abilities; strengthening and expanding capabilities for training partner aviation forces, as well as capacities for ministerial-level training; and creating mechanisms to facilitate more rapid transfer of critical materiel. Working with interagency partners and with Congress, DoD is also exploring how to improve the ways in which security assistance funds are authorized and overseen within the executive branch to enhance their effectiveness in supporting national security goals.

A failure by the Department to secure its systems in cyberspace would pose a fundamental risk to our ability to accomplish defense missions today and in the future. Attacks in cyberspace could target command and control systems and the cyberspace infrastructure supporting weapons system platforms. To ensure unfettered access to cyberspace, DoD mission-critical systems and networks must perform and be resilient in the face of cyberspace attacks. The recent

establishment of U.S. Cyber Command is a critical step forward. In addition, the Department is taking steps to identify mission-critical command and control systems and networks, examining how best to further protect them, and exploring ways to develop operational approaches and logistics that better address potential vulnerabilities. The Department is also actively participating in a broader interagency approach for securing cyberspace, including the Comprehensive National Cybersecurity Initiative (CNCI). To ensure that U.S. Armed Forces are properly trained and equipped to counter this threat, the Department must develop and maintain the ability to accurately assess the performance of network-enabled information systems in realistic threat environments.

Force Management Risk

Key issues in force management include supporting operations in Afghanistan and Iraq, providing health care to DoD personnel, and ensuring the proper mix and roles of the Active Component and Reserve Component.

The scale and duration of concurrent operations in Afghanistan and Iraq are placing a considerable strain on individual service members and their families, on the overall health of the All-Volunteer Force, and on our ability to reset and reconstitute it. Because it has been engaged in war for eight years, the Department has been unable to maintain desired deployment to dwell ratios. In the near term to midterm, this high operational tempo requires DoD to pay extra attention to the well-being of our service members, their families, and institutions. The Department is continually measuring rates of suicide and divorce, among a range of other indicators, to identify strains on the health of the force. DoD assesses these data against national benchmarks and Service-specific trends. Although the Department is currently meeting its targets for recruitment and retention, for instance, we continue to closely monitor these numbers. The drawdown in Iraq, coupled with increased requirements in Afghanistan, will dictate the pace of movement toward more sustainable dwell rates. Demand for support, however, is an enduring need that will not end with withdrawal of service members from combat. It is critical that an extensive, institutionalized system of support for the All-Volunteer Force be strengthened and sustained. The Army's Comprehensive Soldier Fitness program, which seeks to place equal importance on mental and physical fitness, is one initiative toward that end. Similarly, the Marine Corps' Combat Operational Stress Control Program aims at equipping leaders with the skills to identify and address signs of stress. In the midterm to long term, the Department's new force-sizing construct and its approach to planning and executing operations will seek to better account for the demands made on the All-Volunteer Force by long-duration operations.

Over the long term, rising costs and continuing pressures threaten the Department's approach to providing high-quality health care to members of the U.S. Armed Forces, veterans, and their dependents. Although achievement of this objective is not at immediate risk, an increasing

number of military health system users, steady cost shares/co-pays, and congressionally mandated benefit increases have all increased the Department's health care costs well beyond the programmed budget. Continued engagement in long-duration operations and a growing number of veterans approaching 65 years of age will further increase DoD costs. DoD continues to identify efficiencies that can reduce cost growth while sustaining high-quality care.

The critical contribution made by the Reserve Component in recent years—currently 25 to 30 percent of U.S. Central Command forces—has led to increased capability and heightened readiness. Significant reductions in use of the RC following the drawdown in Iraq and efforts to reset the force will necessitate a thorough assessment of RC readiness and future roles. The Department has already initiated several studies examining issues associated with employing the RC on a routine, rotational basis as part of the total operational force, changing the AC/RC mix, and/or changing the role of the RC. Drawing on this work, the Department will explore the potential to redefine the role of the RC for both domestic and overseas operations.

Institutional Risk

Key issues that pose institutional risk include reforming general acquisition processes, optimizing information technology acquisition processes, and maintaining the defense industrial base.

Shortcomings in the acquisition process put the Department at risk of being unable to deliver the capabilities it needs, when it needs them, and at acceptable costs, and these potential failures in turn threaten the successful execution of military operations. The Department's acquisition and support processes have rightly received consistent criticism for delays, cost growth, an overstretched workforce, and other inefficiencies. Given the importance of a healthy acquisition process, we must not embark on programs with artificially low cost estimates, immature designs and technology, fluid requirements, excessive technical authority certification requirements, unstable budgets, and unsustainable procurement profiles. The December 2008 release of DoD Directive 5000.02, "Operation of the Defense Acquisition System," seeks to mitigate key risks associated with the acquisition process. The Department will closely track implementation of new policies instituted by the directive aimed at ensuring more rigorous assessment of alternatives, competitive prototyping, more frequent and effective program reviews, the prevention of requirements creep, independent assessment of "technology readiness," and better methods of testing and evaluation. We must also ensure that the Department is able to rapidly create prototypes and field new capabilities, maximizing its ability to meet warfighter needs and leverage technological advantages. By 2015, the Department also plans to hire 20,000 new acquisition professionals, filling 9,000 new jobs and 11,000 converted contractor positions.

The Department's deliberate acquisition process is especially poorly suited for keeping pace with innovations in information technology (IT). The inability to acquire powerful IT solutions in an economical manner hampers the Department's efforts to use information as a force multiplier to

ensure and enhance agility, flexibility, responsiveness, and effectiveness. This results in an enduring missed opportunity to benefit more fully from DoD, interagency, and international IT capabilities. The Department must reform the IT acquisition process, drawing on successful commercial practices, with a view to accelerating the acquisition cycle.

The Department's need for a robust defense industrial base with appropriate levels of competition, innovation, and industrial capacity represents another area of institutional risk. Since World War II, the U.S. defense industry has consolidated and contracted around 20th century platforms. The U.S. defense industry is, accordingly, not well-positioned to meet the Department's 21st century requirements. This creates risk that extends not only to the relatively small number of major, established providers of defense platforms but also to a much larger community of product providers. Working closely with international partners and industry, the Department will strive to better ensure that its future requirements can be met. Such an approach should not, however, include underwriting sunset industries or sustaining poor business models—courses of action that simply exacerbate risk to the equipping of the U.S. military.

Future Challenges Risk

Preceding sections highlighted numerous challenges and opportunities in the security environment. Other major issues that pose future challenges include managing uncertainty about the future environment and science and technology (S&T) trends.

Difficulties in anticipating the nature of the future security environment create the risk that the Department may not be adequately prepared for threats that materialize over the midterm to long term. To better hedge against the uncertainty inherent in long-term defense planning, the Department drew on a wide range of analyses—including the use of multiple scenarios and combinations of scenarios—to inform its judgments for this QDR. DoD also benefited from analysis on the likely future security environment produced by the U.S. intelligence community. DoD intends to further refine this analytic process, making it more iterative and adaptive, and leveraging the results of experimentation and alternative futures analysis to enhance efforts to manage future risk.

A number of factors related to research and development will, over time, generate increased risk to America's technological edge. As global research and development (R&D) investment increases, it is proving increasingly difficult for the United States to maintain a competitive advantage across the entire spectrum of defense technologies. Even at current, relatively robust levels of investment, the DoD S&T program is struggling to keep pace with the expanding challenges of the evolving security environment and the increasing speed and cost of global technology development. The Department's options for managing risk with respect to S&T must be synchronized with efforts by other agencies as well as the private sector. The health of the U.S. R&D base is well beyond the mission of an individual department; it is also driven by

commercial and academic interests beyond the direct influence of DoD spending. To assure future technology competence, the Department will continue to be a leading proponent of education standards and opportunities relevant to the technology requirements to enhance national security. The Department will consider the scope and potential benefits of an R&D strategy that prioritizes those areas where it is vital to maintain a technological advantage. This effort will be coupled with further work to assess how best to work with the academy and industry, as well as key international allies to leverage breakthroughs and avoid duplication.

Strategic, Military, and Political Risk

In the face of ongoing war and a range of pressing current and future challenges, the United States requires a defense strategy and portfolio of military resources that can help protect and advance the nation's interests. To create and maintain the right mix of forces and military capability, the Department must make hard, strategy-informed choices. To do so, it must determine where to invest additional resources and where to accept and manage a degree of operational, force management, institutional and future challenge risk over the near and longer-term. These judgments inform our broader consideration of strategic, military, and political risks, as required by Title 10 legislation.

In the 2010 QDR risk assessment, strategic risk constitutes the Department's ability to execute the defense priority objectives in the near term, midterm, and long term in support of national security. Military risk encompasses the ability of U.S. forces to adequately resource, execute, and sustain military operations in the near- to midterm, and the mid- to longer term. In the international context, political risk derives from the perceived legitimacy of our actions and the resulting impact on the ability and will of allies and partners to support shared goals. In the domestic context, political risk relates to public support of national strategic priorities and the associated resource requirements in the near term, midterm, and long term.

This QDR identified areas of weakness in our defense program, presented options to mitigate them, and made recommendations on where and how to rebalance the Department toward our most pressing challenges. The risks identified in this section will require sustained leadership attention in order to ensure that they are successfully managed and mitigated. The QDR risk assessment concludes that the Department is positioned to successfully balance overarching strategic, military, and political risk between the near to midterm and the mid- to long term, as well as across the full range of military missions required to protect and advance national interests.

CONCLUSION: THE WAY AHEAD

This QDR report and the preceding months of deliberation served two purposes: first, to establish the Department's key priority objectives, providing strategic context and recommendations on key capability development and investment priorities; and second, to communicate the Secretary's intent for the next several years of the Department's work. The QDR serves as a capstone institutional document, shaping how the Department of Defense will support America's military personnel today, while building the policy and programmatic foundation that will enable the next generation to protect the American people and advance their interests.

The challenges facing the United States are immense, but so are the opportunities. This QDR clarified the Secretary's priority objectives for the Department: prevail in today's wars, prevent and deter conflict, prepare to defeat adversaries and succeed in a wide range of contingencies, and preserve and enhance the All-Volunteer Force. The Secretary has been clear, and this report reaffirms the need to manage risk prudently across these objectives in favor of prevailing in today's wars—it has outlined in detail how the Department intends to further rebalance its capabilities and reform its institutions in order to do so.

Strategy-driven, this QDR provided an assessment of the strategic environment, America's national interests and global role, the role of U.S. military power, and a comprehensive description of the Department's strategy and the implications for capability development, key policies and authorities, and our key defense relationships at home and abroad.

This report will be used to shape and influence a series of ongoing processes and reviews that provide direction to Department of Defense components. The strategic and investment priorities described in this report reflect the Secretary's intent as the Department continues to reform and rebalance the U.S. military to better enable success in today's wars while preparing for tomorrow's threats.



**CHAIRMAN OF THE JOINT CHIEFS OF STAFF
WASHINGTON, D.C. 20318-9999**

MEMORANDUM FOR THE SECRETARY OF DEFENSE

Subject: Chairman's Assessment of the 2010 Quadrennial Defense Review (QDR)

- 1. In accordance with title 10, United States Code, Section 118, I forward my assessment of the 2010 QDR for inclusion in the subject report.**
- 2. From my perspective, the QDR takes positive steps to support the Department's efforts to rebalance the force and reform processes. It provides needed focus on improving stability and defending our vital interests in the Middle East and South Asia, as well as continuing to be good stewards of the health of the force and balancing global strategic risk.**

A handwritten signature in black ink, reading "M. G. Mullen", with a long horizontal flourish extending to the right.

**M. G. MULLEN
Admiral, United States Navy**

CHAIRMAN'S ASSESSMENT OF 2010 QUADRENNIAL DEFENSE REVIEW

The QDR identifies initiatives and areas for focus that address my top priorities: improving stability and defending our vital interests in the Middle East and South Asia, remaining good stewards for the health of the force, and balancing global strategic risk.

Winning Today's Fight: Vital Interests in the Middle East and South Asia

The QDR places appropriate priority on our mission to disrupt, dismantle, and defeat al Qaeda globally and particularly in Afghanistan and Pakistan, and to prevent it from threatening America and our allies in the future. We must continue to find new ways to meet the pressing needs of our forces engaged in these important operations as we complete a responsible drawdown in Iraq and implement the new strategy in Afghanistan.

The QDR supports investment in many critical enablers that have been persistently short in our inventory. Examples include rotary wing aircraft, unmanned aerial systems, counter-improvised explosive device capabilities, Special Operations Forces, Civil Affairs, language and cultural expertise, and capabilities that will enable increased Security Force Assistance activities. The QDR also recognized the need to expand our electronic warfare capabilities and enhance intelligence and information operations capabilities. These key capabilities, as well as new technologies being explored, support flexible and effective forces for today's fight and contribute to our readiness for operations across the full range of military operations.

I remain concerned about the nuclear ambitions and confrontational postures of Iran and North Korea. The QDR emphasizes the President's focus on engagement and reinforces our efforts to work with allies and partners to prevent global nuclear proliferation, regardless of origin. At the same time, it addresses the need for investment in developing appropriate counter-WMD measures and consequence management responses. It also calls for expanding our capabilities to detect and secure uncontrolled weapons of mass destruction and related materials, as well as the need to enhance nuclear forensics – both of which are vital to our national interests.

I applaud the QDR's focus on rapidly providing our warfighters with essential capabilities, and I am convinced that innovative commercial technology solutions and streamlined developmental efforts can and will be applied to ongoing operations.

Health of the Force

I emphatically support the QDR's focus on preserving and enhancing the all-volunteer force as the foundation of our military. The men and women of our Armed Forces, as well as their families, are America's greatest strategic assets, and as such, we must do all we can to preserve

their quality of service and honor their commitment. As we finish well in Iraq and shift the main effort to Afghanistan, we have the opportunity to begin resetting and reconstituting our units and, as dwell time increases, reduce stress on our service members and their families.

The QDR advocates important initiatives for improving the health of the force. These initiatives will enhance warrior and survivor care and provide a single medical record for our service members throughout their lives. The QDR reinforces the urgency to increase research and treatment for a broad range of injuries, especially the signature wounds of Post Traumatic Stress



U.S. Navy Admiral Mike Mullen, Chairman of the Joint Chiefs of Staff reenlists ten soldiers assigned to 2/5 Stryker Brigade stationed at Forward Operating Base Frontenac in Kandahar, Afghanistan, December 17, 2009. DoD photo by Mass Communication Spec. 1st Class Chad J. McNeeley.

and Traumatic Brain Injuries. Increased rates of combat stress, substance abuse, and suicide point to a force that is under a high degree of pressure from repeated long deployments and limited time at home. Reducing deployment time and increasing time at home, as appropriate for each component, are important for reintegrating our service members returning from a combat environment to routine activities at home. Though the force has remained incredibly resilient over the course of eight years of

war, we must prioritize programs that sustain resiliency such as: child care facilities, quality education for children, 24/7 family support assistance, outreach to Guard and Reserve members and their families, and referrals for non-medical counseling. By emphasizing the emotional, social, spiritual and family aspects of fitness, these health-of-the-force investments will pay dividends in national security today and well into the future.

The Reserve Component plays a vital role in meeting our defense missions and in enabling us to manage stress on the active force. In short, we could not have accomplished what we have these past eight years were it not for our Reserve and National Guard forces. I applaud the QDR report's commitment to conduct a comprehensive assessment of Reserve Component policies. In that review, it is important that we consider the proper balance of maintaining the operational capabilities and strategic depth of the Reserve Component as an integrated force to meet requirements across the full spectrum of conflict. Access to the Reserve Component remains a critical lever for meeting global operational demands without substantially increasing the size of the active force.

I also strongly endorse the QDR's efforts to address joint force readiness for the full range of challenges we face. The focus is on building joint force capability and capacity for irregular

warfare without compromising our conventional and nuclear superiority. Although we have always retained sufficient capacity and capability to address the entire spectrum of threats, an aggressive and sustained tempo of operations has necessitated prioritizing training and readiness for current missions over other types of operations. With the drawdown in Iraq and appropriate time and resources provided for reset and reconstitution of the force, our readiness and availability to counter multiple, wide-ranging challenges will increase and we will move toward desired goals for force rotation. Many elements of the joint force will remain in high demand in the near term, and will continue to reset in stride between deployments. We must continue our progress towards a properly balanced force.

Reset and prepositioned stock replacement are two crucial issues for maintaining readiness. We need to reset equipment that is lost in combat and repair or replace equipment degraded by wear and tear, with full restoration not expected until years after OIF and OEF are completed. Ensuring funding for related activities, such as depot operations, is essential for maintenance of the force. And the enormity of the equipment and unit reset challenge, as we withdraw from Iraq and increase efforts in Afghanistan, will require continuous review of our joint requirements and timelines. In the mid to long term, it is imperative that we have a robust industrial base with sufficient manufacturing capability and capacity to preserve our technological edge and provide for the reset and recapitalization of our force.

Properly Balance Global Strategic Risk

My assessment of risk in the QDR is based on a realistic understanding of the security environment which remains complex, dynamic, and uncertain. While defense analysis identifies trends, it is problematic to predict the time, place, and nature of future challenges. The QDR force planning construct is properly focused on balancing capabilities to fight today's wars with those needed to counter future potential adversaries. It enables us to build a ready and agile force with sufficient capacity and capability to defeat adversaries across the range of military operations. And finally, it places priority on our ability to defend the homeland and support civil authorities.

We expect to be increasingly challenged in securing and maintaining access to the global commons and must also be prepared for operations in unfamiliar conditions and environments. The QDR gives solid direction on developing capabilities that counter the proliferation of anti-access and area-denial threats, which present an increased challenge to our maritime, air, space, and cyber forces. Our national strategy also depends on our ability to rapidly project forces and resupply globally, giving us the ability to provide our operational commanders with forces and logistics superiority when and where needed. Furthermore, while we have better organized our forces to operate in the cyber domain, the QDR highlights the need to break down institutional barriers and ensure our cyber capabilities receive the support necessary to properly provide our

national security. In addition, the QDR initiated important efforts to explore requirements involving long-range strike capabilities, enhancing the protection of our valuable assets, accelerating the development of unmanned systems across components, and improving our integrated missile defenses. The QDR reinforces developing flexible and adaptable regional deterrence which includes missile defense.

I fully support the QDR's increased emphasis on the important roles of our interagency and international partners in achieving our desired end states and helping to balance global risk. No one – and certainly no one military – can do it alone. We must strive to develop a better understanding of the roles, missions, and authorities of departments and organizations within the U.S. government and to minimize friction and duplicative efforts. This concern is particularly acute in the areas of cyber, space operations, and homeland security where the interests of many government departments intersect. Although our joint force must retain the capacity to act decisively when appropriate, we prefer to partner and work with others in major operations across a wide range of contingencies. Building the capacity of our partners to deter and prevent conflict makes them more capable of providing assistance as we address common threats together. Increasing the capacity of our partners and increasing the sharing of information are important national security investments. If partners are unable to build the needed capability or capacity, however, our joint force must be able to shoulder the security burden when directed.

I strongly agree with the QDR's vision of a globally engaged force that supports the development of security forces and conducts necessary operations against violent extremists around the world, in addition to other operations. To meet this goal, we must maintain appropriate force levels and expertise. This will require allocation of sufficient resources to maintain the correct balance of capabilities and capacity within the joint force. As we apply resources, we will prioritize readiness and capability over capacity.

The QDR assessed regional posture requirements measured against global strategic and policy expectations. This approach leverages key capabilities, that are prepositioned, rotational, and forward-stationed, to maximize the benefits of presence in a region while ensuring the capability to meet warfighting demands globally. This tailored approach to force posture assures allies and deters potential aggressors, while maintaining appropriate force levels in the continental United States to support critical defense and civil support missions at home and for expeditionary global response. Our strategy supports the development of a tailored posture in the broader Middle East and Central and South Asia, promotes a peaceful and stable Asia-Pacific region, and reaffirms our commitment to NATO and Europe.

Conclusion

U.S. Armed Forces can perform the missions called for in the QDR. Within this mission set, two strategic imperatives require our immediate attention. First, we must disrupt, dismantle, and

defeat al Qaeda in Afghanistan and Pakistan while acting against its global affiliates, and prevent its capacity to threaten the United States and our allies. Second, we must continue to prevent and deter conflict in strategically important regions, including those involving Iran and North Korea. Our success in these and other missions depends upon obtaining sufficient, timely funding to reset the force and restore readiness and a responsible withdrawal from Iraq.

Managing risk under the new QDR force planning construct requires further analysis, including new scenarios to test joint concepts of operation and force mixes and the development of associated operational and strategic assumptions. Our planning and assessment efforts will vary the size, duration, and simultaneity of operations and account for associated policies and goals for force rotation, disengagement, and access to the Reserve Component.

Overall, the QDR provides an accurate depiction of our future national security requirements. Our challenge as a nation will be to properly resource these priorities.