



**A New Maritime Strategy**  
**for Twenty-First-Century National Security**

**FINAL REPORT**

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*This report does not necessarily reflect the views of the cosponsors or organizers.*

# **A New Maritime Strategy for Twenty-First-Century National Security**

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The 37<sup>th</sup> IFPA-Fletcher Conference on National Security Strategy and Policy  
September 26-27, 2007 

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 Washington, D.C.

## **Final Report**

*Organized by*

Institute for Foreign Policy Analysis  
International Security Studies Program of The Fletcher School,  
Tufts University

*Cosponsored by*

Naval War College  
Defense Threat Reduction Agency





# Contents

Foreword	v
Executive Summary	vii
Opening Address	1
Session 1	7
<i>The Transformed 21st Century Security Setting</i>	
Session 2:	20
<i>Globalization and the Maritime Strategy: Strategic Challenges</i>	
Luncheon Address	36
Session 3	39
<i>Operational Challenges</i>	
Session 4	51
<i>Finding the Proper Operational Mix</i>	
Dinner Keynote	62
Session 5	76
<i>Combatant Command Perspectives on the New Maritime Strategy</i>	
Session 6	89
<i>International Perspectives: Developing Global Maritime Partnerships</i>	
Luncheon Address	106
Session 7	111
<i>Developing, Building, and Maintaining the Requisite Naval/Maritime Force Structure</i>	



# *Foreword*

On September 26-27, 2007, the Institute for Foreign Policy Analysis (IFPA), in association with the International Security Studies Program (ISSP) of The Fletcher School, Tufts University, convened the 37th IFPA-Fletcher Conference on National Security Strategy and Policy. In this, as in previous conferences in this series, our goal was to encourage open and candid in-depth discussion of key national security issues. For this purpose we brought together speakers and participants representing a broad spectrum of expertise, experience, perspectives, and knowledge.

In this conference, *A New Maritime Strategy for 21st-Century National Security*, emphasis was placed on strategic challenges in light of the transformed security setting; operations issues, including force structure, modernization priorities, and personnel needs; perspectives from the Combatant Commands; international dimensions in an era of globalization; and the types of research and development as well as the indispensable role of industry and the private sector as we move forward with a new maritime strategy. Throughout the conference our goal was to contribute to informed discussion of these crucially important topics.

Each of our many conferences in this series has been organized with official cosponsorship in order to bring together those who have formal responsibilities and outside participants who have unique perspectives and often prior experience as well as knowledge and expertise. Our cosponsors have included the military services or military commands as well as civilian U.S. agencies and offices. The U.S. Army, Navy, Air Force, Marine Corps, Coast Guard, Northern Command, and Special Operations Command have cosponsored IFPA-Fletcher national security conferences. We have also had cosponsorship from the Office of the Secretary of Defense (Policy) and the National Nuclear Security Administration of the Department of Energy.

For this 37th IFPA-Fletcher Conference we were pleased to have the cosponsorship of the Naval War College and the Defense Threat Reduction Agency. Because this Conference offered a unique and timely forum on maritime security challenges, we publish this report which summarizes and synthesizes conference presentations and discussions in order to give broader dissemination to the proceedings. The report, together with transcripts from the presentations and other related information, can be accessed at our website, <http://www.ifpa.org>.

Much remains to be done to design and build maritime forces for a dynamic and changing security setting. This report is intended to help bridge the gap between the New Maritime Strategy as a concept and its implementation as part of the transformation of U.S. forces to meet twenty-first-century defense needs.

*Robert L. Pfaltzgraff, Jr.*

President

Institute for Foreign Policy Analysis

# *Executive Summary*

The new Maritime Strategy reflects the transformed geopolitical setting in which:

- The United States emerged from the Cold War as the only global superpower.
- With fewer ships than during the Cold War, the U.S. Navy nevertheless possesses global naval supremacy. As it looks to the future, the United States faces the likelihood of new maritime competitors.
- The new maritime setting is shaped by globalization. Advances in technology produce more reliable and nearly instantaneous communications.
- Information including news, ideologies, technological advancements, or scientific discoveries, is transmitted with unprecedented speed and ease.
- These enablers and products of globalization connect the otherwise disconnected thereby constructing a communal, regional, and global network.
- Globalization facilitates economic growth in countries around the world.
- Today's global economy exhibits greater interdependence with rapidly expanding seaborne commerce that is indispensable to sustained growth and prosperity.
- Environmental changes are transforming the maritime geography.

- The waters of the Arctic are slowly opening, with profound consequences for maritime security and resource development.
  - The opening of the Arctic leads to new commercial shipping routes, tourist destinations, increased global transport, resource opportunities and military activity.
  - The United States at present lacks a comprehensive Arctic strategy and policy.
- Energy is a major component of security policy.
  - There is high energy demand resulting from the needs of countries experiencing economic growth, such as China and India, as well as countries in which already high demand continues to increase, such as the United States.
  - Energy supplies remain uncertain as a result of rising demand and geopolitical factors.
- The importance of the maritime area is heightened as a result of several considerations:
  - Over 90 percent of global trade travels by sea.
  - More than 60 percent of petroleum and natural gas is transported by tankers.
  - Due to advances in technology, offshore resources will be even more widely exploitable than they are today.
  - The majority of the world's population lives within a few hundred miles of an ocean.
  - A nation's maritime strength remains a key measure of its overall power.

There are numerous threats and challenges in the 21<sup>st</sup> century maritime security landscape.

- While facilitating economic growth and other benefits, globalization has also enhanced the capabilities of terrorists, enabling them to communicate globally and transmit information with greater ease. Terrorists will continue to exploit the maritime area to support their activities. For example,

ships provide platforms from which to launch WMD and other terrorist attacks.

- The illegal transport of WMD systems and components is a major threat to national security. The seas represent important transit avenues for weapons of mass destruction as recognized in the Proliferation Security Initiative (PSI), which relies on the voluntary participation of partner nations. Participants work cooperatively and consistently with national and international laws in order to prevent the spread of weapons of mass destruction and related systems and materials.
- Arms dealers, drug traffickers and human smugglers continue to exploit the maritime area by employing illegal shipping as a means of transporting their cargo globally.
- Although piracy is not a new threat to maritime security, advances in communication technologies and the increasing availability of weapons further empower pirates with the ability to attack shipping, as we have seen in recent years.
- Despite the heightened attention given to unconventional threats, traditional strategic concerns persist. The rise of major powers, such as China, may challenge U.S. naval supremacy in the future and potentially disrupt the stability of the maritime area.
  - China is emerging as a major regional power in the Pacific and aspires to become a peer competitor.
    - China, fueled by a growing economy, is actively modernizing and expanding its military to accommodate its strategic ambitions. Historically, great powers build formidable navies. The Chinese Navy is rapidly enhancing its capabilities by expanding its submarine fleet with new classes of diesel and nuclear submarines, increasing the number of surface ships, as the recent acquisition of Russian-made guided missile destroyers demonstrates, as well as placing a renewed focus on advancing its ballistic missile capabilities.

- As China becomes more dependent on international trade and its reliance on foreign energy sources grows, China is developing a blue water navy that will defend its maritime commerce and strategic interests in the Pacific and beyond.
- India is also rapidly expanding its naval capabilities due to its own economic successes as well as a pressing need to secure energy resources and other regional pressures.
  - India has an indigenous shipbuilding industry that has more than a dozen new ships in the pipeline, including an aircraft carrier.
  - India is also buying ships from several maritime nations. For example, the United States sold India the amphibious transport ship *USS Trenton* now named *INS Jalashva*.
- Chinese military expansion, together with its growing economic influence, particularly in Asia, may place additional pressure on Japan to develop its military potential with a greater sense of urgency and purpose.
  - Japan is increasing its fleet to accommodate its commitment to international humanitarian assistance and other obligations. Japan will be adding to its airborne maritime capability the highly anticipated helicopter-carrying destroyer, 16DDH.
- The collapse of the U.S.S.R. led to reductions in the number of U.S. ships and personnel. In light of the mounting challenges as well as the desire to maintain its naval superiority, several participants noted, the U.S. Navy fleet may be too small, understaffed and ill equipped to meet the demands of the 21<sup>st</sup> century security landscape. Today's navy is less than half the size of the fleet during the Reagan administration. The new Maritime Strategy focuses on building international partnerships in order to leverage U.S. maritime assets with those of other nations. Some participants expressed concern that forging international partnerships at the expense of expanding national capa-



bilities could severely weaken the U.S. Navy's ability to fulfill its primary mission objectives, namely to fight and win wars and to exert U.S. influence globally.

Critical elements for meeting the challenges, countering the threats, and implementing the new Maritime Strategy.

- Maritime domain awareness is the backbone of any maritime strategy and the lynchpin on which successful maritime security policies rest. Greater maritime domain awareness will be achieved through the enhancement of international and commercial partnerships, improved intelligence sharing, advancements in technology, increased interoperability, and greater interagency cooperation.
- The new Maritime Strategy emphasizes the importance of partnerships and the need to build working relationships with other nations. The nexus between the economy and security requires international maritime cooperation among the many nations sharing our interests in seaborne commerce.
- While serving as Chief of Naval Operations, Admiral Michael Mullen initiated the development and encouraged the implementation of The Global Maritime Partnership, previously known as the 1,000 ship navy concept. The Global Maritime Partnership promotes the development and effective utilization of a web of relationships with other nations to meet the maritime security demands of the 21<sup>st</sup> century.
- International conferences and joint military exercises are powerful tools that facilitate and strengthen partnerships. The Western Pacific Naval Symposium, a regional forum designed to promote maritime understanding and naval cooperation in the Western Pacific region, and RIMPAC, the Rim of the Pacific exercise, conducted off the Hawaiian coast involving participants from the Royal Navy, the Canadian Navy, Japan's Maritime Self-Defense Forces, the Korean Navy, the Royal Australian Navy, the Peruvian and Chilean navies, serve as good examples.

- Developing and maintaining military-to-military relations with potential peer competitor powers such as China remains a challenge. However, such a relationship may serve as a basis for easing future tensions and resolving political disputes.
- Although a degree of cooperation exists between the U.S. military and the commercial shipping industry, as demonstrated by The Voluntary Inter-modal Sealift Agreement, the potential of this working relationship is an asset not fully realized. The commercial shipping industry possesses a robust fleet and is expansive in geographic scope. The Maersk Global Shipping Group, for example, operates a fleet of over 1,000 ships, which includes a fleet of 550 container ships. The utilization of the commercial shipping industry through cooperation would greatly enhance the Navy's capabilities.
- The process governing technology transfers to partner nations is outdated and unnecessarily complicated. The rules and laws surrounding technology transfers require reevaluation in order to expedite the transfer of technology as well as the procurement of needed technologies developed overseas without compromising U.S. national security. The Royal Australian Navy's Air Warfare Destroyer Program is a model of an effective transfer of technology. The program, intended to equip new Australian destroyers with the Aegis system, provides for the sale of Aegis systems to Australia where the government of Australia, Raytheon Australia and ANC Shipbuilder incorporate the Aegis system into a new warship. Such technology transfer also enhances interoperability between partner nations.
- The United States needs to foster an environment that encourages technological development and innovation. The government must work with the private sector to create and exploit technological breakthroughs. Supporting a culture of creativity and innovation means that the

government-industry relationship must replace strategies based on risk aversion with a willingness to accept and manage risks.

- The Navy must improve the manner in which it works with companies and inventive people who are not defense contractors. The same contracting and legal requirements apply to both small, innovative companies and large defense contractors thus impeding the Navy's ability to acquire and apply innovative technologies in a timely fashion. Furthermore, stipulations requiring the use of U.S. vendors, scientists, and students often prevent the Navy from taking full advantage of international opportunities.
- There is a growing disconnect between requirements and cost. Our fleet size and capabilities are shrinking while cost is rising. As a result of corporate mergers and inefficient government policy, shipbuilding costs continue to increase. Layoffs and the departure of skilled workers threaten our shipbuilding capacity and, as a result, the competitive defense-industrial base. If such trends continue, affordability of new systems will be in doubt.
- The new Maritime Strategy emphasizes the need to improve interoperability and the joint capabilities of the U.S. Navy, the Coast Guard and the Marine Corps. Purchasing platforms that can be used jointly and not strictly service specific represents one way to improve interoperability. Joint acquisition must support joint war fighting.
- The need for greater interoperability and coordination applies to the theater Combatant Commands as well. With respect to issues regarding command and control, for example, panelists expressed concern that the seams need to be closed between PACOM and NORTHCOM in the delineation of intercept responsibilities for a missile launched against targets within the NORTHCOM AOR.

- Nations are not eager to share intelligence. However, leveraging global maritime partnerships for the purposes of improving maritime security through the sharing of intelligence with partner nations is of critical importance. The Turkish Navy surveillance system provides a good example of intelligence sharing that is based on strong international partnerships. The system is equipped with automated identification systems and gathers data concerning the Black, Aegean and Mediterranean Seas and then disseminates the information to NATO.
- Ballistic missile defense is a key pillar of U.S. deterrence policy in which the Navy plays a vital role. The Aegis system has achieved considerable success, demonstrating the viability of an effective missile defense.
- The nation's ports and harbors remain vulnerable to a terrorist attack as well as for WMD or WMD-related materials to pass through port security undetected. The Department of Homeland Security is countering such threats by deploying over 1,100 radiation systems to major seaports and land border crossings.
- The maritime services possess the necessary experience as well as unique capabilities that will continue to provide humanitarian assistance and to execute disaster relief missions when necessary. The hospital ship *USNS Mercy*, for example, frequently engages in humanitarian assistance and disaster relief operations. The *USNS Mercy* participated in the 2005 Tsunami relief efforts.
- The maritime services and the Department of Defense need to continue to reassess the classic doctrines that proved instrumental for developing effective military strategies during the Cold War. Although policies are evolving to reflect the post-Cold War era, doctrines regarding deterrence, escalation, de-escalation and other concepts must continue to be reexamined under current security requirements and the state of today's armed forces.

- The future operational mix, force structure and deployment requirements must evolve to reflect the needs of current and future operational demands, such as the dependence on carrier strike groups as opposed to sea-basing for expeditionary strike groups, the Global Maritime Partnership, and the future of amphibious warfare. For example, the likelihood of future massive landings by amphibious assault vehicles is not high. Therefore, the Marine Corps will have to develop and deploy new technologies and tactics to infiltrate enemy territory from the sea.
- Finally, in order to accomplish the goals set forth by the new Maritime Strategy and to meet the demands of the 21<sup>st</sup> century security landscape, the maritime services must receive adequate funding. Reductions in the defense budget will only impede the ability of the services to perform their duties and accomplish their missions.

*Day One*

*September 26, 2007*

# *Opening Address*



## **Admiral Michael G. Mullen**

President Ronald Reagan stated in his 1982 address to the British Parliament that the “ultimate determinant in this struggle now going on for the world will not be bombs and rockets but a test of wills and ideas.”

- Although President Reagan referred to the confrontation with Soviet communism, his words ring as true today as when he first uttered them.
- The physical nature of the threats we face has changed, but at the broad strategic level, it still remains a contest of wills and ideas.
- I am not convinced that the senior military leadership spends enough time thinking strategically about how to win that contest.

Last year I issued a challenge at the Naval War College in Newport, Rhode Island and called for a new Maritime Strategy to promote and protect our national interests, our vital national interests, which are intertwined with global interests. The process of developing this strategy was designed to generate a competition of good ideas.

- We have listened to numerous voices and opinions over the course of the last year.
- The process has been inclusive, tapping into the intellectual capacity of component and combatant commanders, as well as the other maritime services, the Marine Corps and our Coast Guard, and our nation to help us look above operations and tactics and well beyond the horizon.
- We are in the midst of a global ideological struggle and the world needs better ideas. The effort needs your robust intellectual rigor and energy in developing any strategy to contend with a very dangerous and a very uncertain future.

In this conflict, reason, free inquiry, innovation, boldness, and a willingness to pursue multicultural enlightenment will undermine the flawed doctrines of extremists, insurgents, politically aligned oppressors, and ideologically stunted demagogues who, unwilling to contend with change, live shackled to the past and threaten freedom and stability around the globe. The world is changing and we must not only deal with the changes, but also take the lead in confronting the challenges.

- Trade has driven multiple civilizations throughout history to globalize within their known world.
- The growth of the Roman Empire, the Islamic civilization's transfer of science, medicine, literature and mathematics, and the British Age of Empire were all driven by trade.
- Good ideas led to the technological innovations that launched the latest round of globalization, and it will take your good ideas to sustain the economic engine that drives the borderless finance, diffusion of knowledge, redistribution of high value services that characterize our world today.
- Globalization does offer some challenges and by its very nature is dependent on relationships. Relationships need to be nurtured.
- The essence of military strategy in this globalized world is the interdependence of the players involved.



Military strategy, such as our new Maritime Strategy, must be envisioned and developed with the idealism embodied in our Constitution and also crafted in a realistic tone to ensure military employment remains flexible and adaptable to a rapidly changing world.

- Sound military strategy must be developed to address the entire spectrum of engagement, from constructive humanitarian assistance and civic action all the way to major theater war.
- Executing such a strategy in support of our national goals and interests will undermine the base for violent ideological transnational terrorists and criminal groups, as well as other state and non-state threats to global stability and peace.

The most pressing priority is the conflict in the Middle East.

- We must not narrow our focus however, solely on those two pieces of the overall global puzzle. We must not lose sight of other state and non-state threats in the region and around the world, as well as opportunities to engage world populations at the grass-roots level, and promote the desire for liberty from within.
- Strategy for success in the Middle East must be envisioned in the context of a broader global view.
- It must also be focused on our own vital national interests and our national interests are inextricably linked with the interests of other nations.

As players in the large global system, the security and prosperity of the United States depend as much on the well-being of the rest of the world as the rest of the world depends on the well-being of the United States.

- The military needs to be afforded the tools to safeguard that global system.
- Maritime forces play a key role in global security and must be properly equipped and employed.
- If we can agree that economic progress is the prime driver for global interconnectedness, then we can use that as the

common language for the building up – and in the case of our new Maritime Strategy, global maritime partnerships, or in the case of national military or national security strategy, global security partnerships.

The longer, larger war against radical jihadists -- and I believe it to be a long war -- and the preservation of the global economy will require worldwide persistent engagement to foster relationships and trust, and to assure that our economically driven global system blossoms into the universal driver of peace and prosperity we hope to enjoy following the defeat of Soviet Communism.

In pursuing economic interdependence as the universal common value to make globalization work, both our national goals and our military strategy will open doors allowing not only for the spread of the ideals we value and hold to be true, but also for helping those ideals take root and grow from within the population.

In the end, by anchoring the lofty ideals we value to the realities of the world we live in, we can and will overcome the test of wills and ideas that are defining our new era, but it will take time, years, perhaps decades. You have a unique opportunity to use your reason and your free inquiry to influence the debate to help develop our strategy over these next couple of days and beyond. So I challenge you today to give us your thoughts, bring us your ideas, and help us keep our heads above and beyond the fog as we consider how to approach the crafting of strategy for the 21<sup>st</sup> century.

## Analysis

As reiterated during the discussion that followed Admiral Michael G. Mullen's opening address, the new Maritime Strategy is the culmination of a long and collaborative effort undertaken primarily by the Navy, the Marine Corps, and the Coast Guard, with the help of other government agencies, partner nations, the private sector and other parties. The process to produce this document was deliberately inclusive. The new Maritime Strategy aims to reflect the nature of the world we live in and likely to see in the future; the growing interdependence of states bound together

by an interlocking global economic system, of which the maritime area plays a crucial and irreplaceable role.

Globalization produces rapid change. The consequences of an increasingly globalized world prove both beneficial and challenging. The facilitation of economic prosperity and the development of international partnerships help intertwine interests and bridge otherwise rival nations. The ease in which information can be transferred with the improvement of global communications spreads ideas and makes the world seem that much smaller. Despite these dramatic realities, the same mechanisms that fuel the global revolution that has led to economic juggernauts and the fast paced technology industry, notable challenges resulting from the very same mechanism may impede future growth and require attention. The interdependence of the system means that a disruption in a local economy somewhere in the world has an effect on the whole system and in turn the global economy. The maritime area is a central environment for international trade on which the global economy relies. Keeping this area secure with free and open sea lanes is a major interest of many nations and remains a focal point for the United States maritime services.

The Pacific and Indian Oceans are emerging as critical pieces in the global supply chain. Admiral Mullen stated that “the global economic center of gravity has shifted to that part of the world.” According to Admiral Mullen, the United States should encourage China’s economic rise because such improvement will only benefit the global economic system. Furthermore, Admiral Mullen mentioned his recent discussions with his counterpart and other high level officials in China. Admiral Mullen encouraged the improvement of military-to-military relations with China, however, acknowledged the need to monitor China’s investment in technologies and eagerness to expand its armed forces, particularly its maritime capabilities. Japan is another key player in the region and a critical partner of the United States. Admiral Mullen highlighted the importance of this relationship. The United States recently performed joint exercises with Japan and another rising player in the region, India.

Admiral Mullen emphasized the importance of improving and enhancing relationships and building international partnerships because of the new Maritime Strategy's reliance on cooperative efforts. One method of strengthening international partnerships is through the process of foreign military sales. The process is cumbersome, requiring reexamination and simplification. Partnerships that need improvement extend beyond the international sphere. During Admiral Mullen's tenure as Chief of Naval Operations, he worked to improve relations with the State Department and to enhance the mutually beneficial relationship with the private sector. Admiral Mullen clearly stated that the new Maritime Strategy is not a strategy to ensure hegemony, but rather a strategy relying on collaboration and cooperation among a wide array of partners. According to Admiral Mullen, the strategy has been well received by members of the international community.

The new Maritime Strategy is not meant to last unchanged for twenty years. Admiral Mullen described a living document, a work that adjusts and adapts to the rapidly changing world in which the maritime services operate.

## Session 1

# *The Transformed 21st Century Security Setting*



## Dr. Jacquelyn K. Davis

The world has changed considerably since the fall of the Berlin Wall, and more so since the attacks on September 11, 2001. The strategic-operational realities surfacing in this new environment have had and will continue to have a profound influence on national security planning, alliances, and on the use of force as an instrument in the national toolkit.

- The new security planning environment is more complex than in the past bipolar world of the Cold War.
- Transnational, non-state actors have demonstrated that they can attain strategic effects, while legacy threats/challenges remain with us and demand attention as well.
- The future of Russia under Vladimir Putin and China remains uncertain as other issues, such as competition for resources in the Middle East and Africa, North Korean nuclear disablement and Taiwan, loom large on the global landscape.
- U.S. Alliance relationships are changing and American access to bases and facilities overseas can no longer be

assumed. The experience with NATO has not been altogether satisfactory in Afghanistan due to the frustrations experienced by the imposition of national restrictions on the use of force, adding differing rules of engagement between the International Security Assistance Force (ISAF) and CENTCOM operations.

Multilateral operations are preferred for political reasons, but maintaining capabilities to fight unilaterally continues to drive U.S. planning. Such operational planning creates new pressures on the defense budget as well as personnel and their rotational deployments.

- Especially in an era of 24-hour news cycle and the new phenomenon of blogging, operations that are protracted and which are politically contentious have little prospect of reaching their desired end-game, as seen with respect to Iraq. The public will support such operations only if there is convincing evidence that they are vitally important to U.S. national security and the risks and costs of remaining engaged are essential to the overall objectives that are sought.
- Problems are exacerbated when Congress attempts to micro-manage operational planning through the budget process. If the budget is not raised to rejuvenate the Army and the Marine Corps, difficult choices will need to be made and many fear that to fix the Army, funds will be siphoned off from the Navy and Air Force accounts.
- Many on Capitol Hill wrongly believe that the Department of Defense's budgetary pressures will be alleviated when U.S. forces leave Iraq. Threats posed by Al Qaeda and other terrorist groups would not end were we to leave Iraq precipitously; it might even exacerbate new threats/challenges.
- Budget constraints also have the potential to place new pressures on U.S. planning for Irregular Warfare (IW) contingencies and Security Cooperation Planning (SC).

The 2006 Quadrennial Review established a construct for dealing with the post-9/11 world, but it failed to address in

any great detail the implications of the changes described above.<sup>1</sup> The new Maritime Strategy attempts to focus on the changed security planning environment without resolving key strategic and operational questions.

- Resolving the issue of whether we will emphasize surge or presence deployments has far-reaching implications for the new Maritime Strategy.
- The Navy may need to re-optimize certain skill-sets to deal with legacy challenges, and create new ones to confront IW and Cyber threats.
- Iran and China will demand creative thought, and the evolution of their military power has implications for regional security planning and operations.
- One of the most important issues that still need considerable thought is that of the future of U.S. deterrence planning, and very specifically, the Navy's role in the New Triad. A central question in this context is: How far and fast should the Navy go in pursuing a missile defense capability, and where is the cross-over between Theater Missile Defense and National Missile Defense in resourcing? The Navy should have a greater role in overall missile defense.



## Dr. Stephen Flynn

Three lessons should have been drawn from the attacks on September 11, 2001 that can usefully inform the development of the new Maritime Strategy. One lesson was learned well, one has been partially learned, and one that has been barely learned at all.

- Bad people intend to attack and kill Americans within our borders and we should identify and locate them beyond

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<sup>1</sup> A Department of Defense link to the 2006 QDR review report is available at: <http://www.defenselink.mil/qdr/>.

our borders and apprehend or kill them first. This lesson has been learned.

- The second lesson, only partially learned by our national security community, is that the economic and civil space is the new battle space for our adversary. Al Qaeda discovered that exploiting and targeting the commercial space as a battleground is both cost effective and accomplishes the objective. While at a strategic level, the maritime strategy acknowledges this as a challenge; at the operational level it has not yet translated that understanding into redirecting resources to assemble effective defenses of the maritime transportation system and the critical infrastructure in and around our ports and littorals.
- The lesson that has been almost completely ignored remains the promise of the citizenry. United Flight 93, which apparently was headed for Capitol Hill, was stopped by the brave passengers onboard once they were aware of the situation. Everyday American people, armed with the information about the nature of the threat, acted in ways that ultimately protected their own government. We usually entrust the government with having the ultimate responsibility to protect the population. Here the reverse was the case. What made the difference was the passengers' awareness of the threat and their seizing on their own capabilities to confront it. The lesson, therefore largely unlearned, is that if the battle space is increasingly civil society and the economic space, to be successful we must engage as many of the participants in that space as possible.

The new Maritime Strategy does formally acknowledge the growth of our economic dependencet on the maritime domain and the necessity to ensure a secure maritime environment.

- The economic imperative of a secure maritime domain and the U.S. Navy's role in safeguarding the waterways is not a new concept for the U.S. military. Alfred Thayer Mahan, the founder of the Naval War College, buttressed his call



for a deepwater navy by emphasizing the nation's need to protect the sea lines of communication.

- One must secure access to the sea in order to remain connected with the world. The maritime domain essentially serves as the conveyor belt for global commercial activity and safeguarding that conveyor belt must be a top priority of the Navy and the U.S. government.
- The new Maritime Strategy fails to provide an adequate operational focus on this economic space. For instance, the strategy is largely silent on the need to assure the reliability of global supply chains. Another illustration of the strategy's inadequacy is the lack of attention given to dealing with the need to safeguard the nation's ports as strategic assets.
- The nation relies heavily on its ports. Of particular importance in this regard is the energy refinery system. Only 10 to 15 days of refined fuels exist in the entire southern California economy, which supports more than 18 million people. Fifty percent of the oil that goes into these refineries arrives in the combined ports of Los Angeles and Long Beach. Should that harbor be disrupted for one month or more, the southern California economy would literally run out of gas. The Department of Defense is spending more on protecting naval assets that project military power beyond our borders than the nation is investing in safeguarding the port of Los Angeles and Long Beach even though it brings in 43 percent of all the containers for the country and 50 percent of all the energy west of the Rockies.
- Given the interdependency for our manufacturing, retailing, and energy sector on our maritime infrastructure, the new Maritime Strategy should be assigning a far higher priority to outlining how it will safeguard it.

The one area where our post-9/11 efforts are falling most short and which the new Maritime Strategy fails to account adequately for is the imperative highlighted by the example of United 93, that we simply will not be successful in securing the maritime space

without active engagement of those who own and operate within it and the citizens who live, work, and play in and around it.

- A maritime strategy that is focused primarily on state-to-state cooperation and the projection of power is not a comprehensive strategy unless it also engages at all levels the industry and people who are likely to be exploited or targeted by our adversaries.
- It is both a practical and moral imperative that those charged with developing and executing the new Maritime Strategy identify ways to make the legitimate commercial and civilian participants in this domain full-fledged partners in the effort to secure the maritime domain.

A successful maritime strategy must be a constant work in progress. The Navy, Coast Guard, and others involved in developing and executing this strategy need to think innovatively, operationally, and practically with respect to how one secures the maritime domain. The nation's success will depend on making this an open and inclusive process with as many of the maritime non-state actor participants, private sector participants, and everyday citizens as possible making their respective contributions.

## **Dr. Robert G. Joseph**

The Proliferation Security Initiative (PSI) is an important element of our national counter-proliferation strategy, a strategy that is designed to protect our nation against weapons of mass destruction in the hands of our adversaries, whether they are states or terrorist actors. PSI consists of a very important maritime component.

- The PSI emerged from the ashes of a failed interdiction effort occurring about two years into the Bush administration. The *So San*, a North Korean ship, was carrying Scud missiles to Yemen in December 2002. The ship was near the Gulf region at a time when the U.S. led efforts to stop and seize arms shipments to Iraq. The ship was also suspicious due to its deliberate not flying a flag in order to conceal its identity. Working with the Spanish, the U.S. searched the vessel

and uncovered the missiles. Yemen, which previously reassured the U.S. that it had not ordered the missiles, claimed once the story was publicized, that the missiles were in fact intended for Yemen and demanded the safe return of the arms. American lawyers determined that no legal grounds allowed for further detainment and the U.S. let the

cargo go. As a result, the Bush administration, unlike previous administrations that responded to negative interdiction experiences by simply not engaging in similar missions, developed a framework to deal effectively with such situations in an improved manner.

- The U.S., along with partner nations, created a new multilateral coalition willing to work together to disrupt the trade and proliferation, whether by sea, on land or in the air.
- PSI targets all avenues of the proliferation trade, of which maritime delivery is perhaps the most common.
- The U.S. built an effective coalition with a small group of countries with whom the U.S. collaboratively developed a statement of principles, later expanding the coalition to those willing to meet the conditions and the requirements that the statement of principles articulates. The initiative was announced by the President in Krakow, Poland, in May of 2003.
- Each state participates on a voluntary basis, and only to the extent that its national policies and authorities permit.
- All PSI activities are undertaken in accordance with national legal authorities and with international law and international legal frameworks in mind.
- PSI by its nature is a group of participating states with no central decision making body. No state has a veto over any other state's actions. No state is obligated to follow the lead of other states in interdiction activities.



- Today, 85 countries have joined the initiative through endorsement of the statement of principles, an action that does not impose any new obligations on the state.

PSI is an enabling structure allowing for cooperation as can be most efficiently designed.

- States participating in PSI have worked together to further develop their legal authorities for interdiction, such states have also enhanced the diplomatic, economic, law enforcement and financial tools available to them.
- PSI participation is also a means for states to enforce U.N. Security Council resolutions regarding WMDs, such as the 18 resolutions regarding North Korea. The U.S. has solicited help from Japan, Australia and others to monitor North Korea's imports and exports, as well as beginning to construct the nuclear detection capability that is required to identify the North Korean transfer of fissile material or a nuclear weapon to a third party.

PSI principles reinforce political will, insure cooperation and build legal and other frameworks to deny proliferators the ability to operate. The PSI principles have also been very helpful in building capabilities. The exercise training program and the operational meetings, especially in the maritime domain, have been effective tools in translating agreed principles into capabilities and action.

- The first interdiction following the creation of PSI involved a German ship, the *B.B.C. China*, which was carrying thousands of centrifuge parts from a manufacturing facility in Malaysia operated by A.Q. Kahn and his associates to Libya.
- To date, nearly 30 exercises have been conducted across the globe. Turkey conducted the largest PSI exercise last year involving over 30 nations. Additionally, a PSI module was added to a maritime exercise in the Gulf last year.
- Between April 2005 and April 2006, the U.S. with PSI partners in Europe, Asia, and in the Middle East, on approximately two dozen occasions have prevented transfers of

equipment and materials to WMD and missile programs, including key components going to Iran's ballistic missile program as well as equipment intended for Iran's heavy water program.

Allow me to offer four brief points in conclusion.

- First, PSI for the U.S. has been a very helpful tool allowing the U.S. to better identify and to conduct interdictions. The institution of PSI has brought together the interagency as never before in this task.
- Second, the Bush administration has based its non- and counter-proliferation initiatives on the premise that we can only succeed if we work together with other countries. The PSI model has spawned numerous collaborative efforts. In 2006, the President along with President Putin in a joint initiative announced the establishment of the Global Initiative to Combat Nuclear Terrorism, which now includes 55 countries.
- Third, PSI reflects the comprehensive nature that the administration has taken to the very complex and dangerous threat of proliferation. This is the first time an administration has developed and put in place a national strategy, identifying three pillars for combating proliferation: prevention, protection and response.
- Fourth, counter-proliferation tools such as PSI can contribute to successful rollback and to a more effective deterrent and defense posture against WMD threats. Success was achieved with Libya because all of the tools available were used and were backed up with political resolve.

## Robert D. Kaplan

Each war tends to harbor different characteristics from the last.

- The Franco-Prussian War gave no indication of what World War I would be like.
- The First Gulf War offered little foresight into the Second Gulf War, the Iraq War.

- Vietnam was much different from Korea and World War II, relating more to the Philippine War of 100 years ago.
- So it may be that the military will master land counter-insurgency just as it recedes over the horizon, or just as it takes its place among many things that the military is charged with. The Pentagon, since it does not have the luxury of planning for one future, needs to plan for several alternative futures.

Part of the military's responsibility is to plan constructively for worst case scenarios. The military, and we as a nation, must think the unthinkable and think about the kinds of conflicts the Navy and the Air Force, the two technical services of the armed forces, may confront in the years ahead.

- Two regions in the world require careful attention; the Pacific and the greater Indian Ocean area.
- China and India are producing massive new middle classes that will number in the hundreds of millions and in turn the demand for energy will rapidly increase.
- Over 90 percent of India's energy needs will come from oil and China is consuming more energy than any country in the world aside from the United States. Much of their energy needs will come from the Persian Gulf area.
- As a result, the Indian Ocean's Sea Lines of Communication will be clogged with tanker fleets and with Chinese and Indian warships protecting those tankers.
- Japan devotes less than 2 percent of its budget to the military, which is ample to field a navy three times the size of the British Royal Navy.
- The Indian Navy is about to become the third largest in the world.
- The Chinese are acquiring and developing nuclear submarines, which indicates that they have blue water imperial ambitions. The Chinese are also building deep water ports, financing them in Pakistan and off the coast of Burma. The Chinese, most likely, will finance a canal across the Isthmus of Kraw in Thailand.

- For the last few decades, the United States could go anywhere and everywhere it wanted in the Pacific Ocean in safety. In the future, including the Indian Ocean, we must prepare for a much more multipolar environment. While the United States is occupied in Iraq and European defense budgets are fairly static, the militaries of China, India, Korea, and Japan, are modernizing.
- A large military does not necessarily translate into a good military. In the 1990s, the Asian militaries comprised seven of the ten largest in the world in terms of numbers of troops and land armies, but it did not mean that they, qualitatively, were of a high caliber.
- We should not view China as an adversary rather we should draw it in with our alliances, leveraging India and Japan very subtly.

In the future multipolar maritime environment with rising peer competitors such as China, the U.S. Navy will play a vital role in securing American interests and safeguarding the maritime domain. We could lose the war in Iraq, we could lose the counterinsurgency battle in Iraq, and it would not necessarily be a disaster because the Navy controls the choke points in and out of the Middle East and still can direct heavy fire anywhere onto shore from the sea. So it is the Navy that is more than ever going to provide the U.S. with the classic power projection it requires.

## Analysis

Session 1 reviewed key elements of the unpredictable security setting that now confronts the United States, noting how they may affect stability and security throughout the global maritime domain. This includes: existing and emerging threats posed by state and non-state actors; reconciling planning for irregular warfare and conventional operations; the security setting since 9/11 and threats to the maritime domain; the Long War ground-force centric model vs. off-shore Global Strike operations; deterring, dissuading, and influencing potential regional adversaries; and

assessing the impact of such key elements on specific naval/maritime missions and operations.

Improved interagency coordination and greater international cooperation are needed if the U.S. hopes to confront threats in the global maritime domain. The U.S. has initiated several programs, such as PSI which creates a non-obligatory international framework for combating WMD proliferation and has generated international success. PSI has served as a model for other modes of cooperation between the U.S. and potential future peer competitors. Dr. Robert Joseph, during the discussion period, mentioned how China, which opposed and criticized PSI at first, now shows greater tolerance for the framework. Dr. Joseph reminded the Panel that China is one of the initial members of the Global Initiative to Combat Nuclear Terrorism, along with Russia, which is based on PSI. Dr. Jacquelyn Davis added to Dr. Joseph's comments by recalling a recent trip to China where Chinese representatives asked questions about PSI with relation to Olympic security planning. From Dr. Davis' perspective, such probing reflects a potential opening at the military-to-military level, hopefully resulting in greater cooperation with respect to regional issues. Dr. Stephen Flynn also stressed the importance of cooperation not only between states and agencies, but also with industry leaders and private citizens. The new Maritime Strategy's lack of emphasis on the individual and its failure to connect with every level of society that deals with the maritime environment are deficiencies. Additionally, Dr. Flynn emphasized the importance of the international setting to shipping security. This is an international venture, and U.S. port security is inextricably linked to international trade. An international security strategy needs to acknowledge and account for the globalized world of today.

The Panelists agreed that economics will influence future security planning in the maritime domain. Dr. Flynn stated during the discussion that the United States needs to review and formulate policy concerning emerging issues, such as the Arctic and the future opening of the Northwest Passage for transit. Several Panelists stressed the increased attention given to the maritime



area because of its importance in the energy industry, both in international trade and offshore energy resources. As China and India increase the global demand for energy, and as new energy hubs are created, the security environment will undergo changes. Robert Kaplan pointed to the Gulf of Guinea and stated that within the next ten years the United States will receive about 25 percent of its oil from West Africa, an increase of 10 percent from 2007. According to Kaplan, massive oil revenues flowing to unstable regimes in West and Central Africa will probably lead to political crises. Furthermore, due to new energy producers and the demands of China and India, the Pacific, the Indian Ocean and the Gulf of Guinea, there will be far greater energy-related shipping.

Dr. Davis discussed the need to tailor deterrence to the specific threats posed by countries such as Iran and North Korea. Nuclear weapons possessors view such capabilities differently from the United States. In Iran's case, for example, its view of nuclear deterrence is an apocalyptic vision of the world coming to an end in which classic nuclear deterrence strategy would not work. Iran believes that nuclear weapons will dramatically alter the geopolitical landscape. Dr. Joseph called a nuclear Iran a dangerous and complex threat. Among the other security challenges shaping the 21<sup>st</sup> century landscape, there was discussion of deterrence and dissuasion. For example, rising energy needs will lead to the wider use of nuclear power. With such use will come unnerving potential for nuclear weapons proliferation. How to dissuade such proliferation and how to deter nuclear and other WMD use were the objects of discussion. Among the efforts to dissuade proliferation discussed was the PSI. It was also pointed out that Iran, a key energy exporter, may also be on the verge of acquiring a nuclear weapons capability.

## Session 2:

# *Globalization and the Maritime Strategy: Strategic Challenges*



## **Lieutenant General Robert R. Blackman, Jr.**

Three important points and considerations regarding the new Maritime Strategy need addressing. First, one needs to analyze the challenges posed by globalization for the Maritime Strategy. Second, how do disaster relief and humanitarian assistance missions impact the strategy. Third, how can the Navy, Marine Corps and Coast Guard more effectively leverage their capabilities to support this globalized security environment and strategy.

- Globalization demands that not only U.S. sea lanes, but all sea lanes, must remain open.
- Sea lanes are critically important to trade and the global economy.
- Super tankers and container ships that must travel the seas around the world are not the only parties that are dependent on open sea lanes, but also the movement of ideas and information.
- Most of the partnerships the U.S. will develop will be regional in nature. Most of the navies in the world perform Coast Guard-like duties. Few navies have genuine blue water capa-

bilities and the U.S. Navy and Marine Corps jointly remain peerless. As a result, the United States will bear the greatest responsibility for maintaining the free flow of global trade and sharing ideas and information.

- To dissuade, to deter, and to fight and win if necessary at sea, the military needs to train and deploy forces for mid and high intensity conflict.
- The U.S. maritime forces need to be ready to handle the most dangerous of circumstances, and possess the tools for the most likely scenarios, which is theater security cooperation and engagement programs in countries and regions around the world.

The United States military must also be prepared for the inevitable humanitarian assistance and disaster relief mission.

- The U.S. Navy and the Marine Corps must be capable of using their capabilities not only for destructive purposes but for other operations as well, including humanitarian missions.
- The military needs to be able to use those capabilities to rebuild lives and deliver relief supplies and hope to people around the world.
- Such diversity of missions requires the imaginative and flexible use of resources as well as training and educating our sailors and marines for these types of operations.

The current fashion of deployment of U.S. maritime forces requires adjustment.

- Traditionally, deployment of U.S. maritime forces was built around the deployment force. Perhaps the military needs to consider deploying forces around the requirements for deterring, dissuading, or simply conducting security cooperation in a purposeful, sequential and regional manner.
- Additionally, the Navy should examine nontraditional uses of the Navy when considering deployment and



fielding requirements. The U.S. military has a tremendous capability that needs to be applied differently. For instance, if two ships sail from Morehead City, one may be destined for a theater security cooperation mission in the SOUTHCOM AOR and the other may go to the west coast of Africa. Afterwards, they rendezvous in the Mediterranean Sea, transit the Suez Canal and operate jointly on the Horn of Africa. Such consolidation and streamlining increases efficiency.

## Shawn J. Dilles

The mission of the National Geospatial-Intelligence Agency (NGA) is to provide timely, relevant, accurate geospatial intelligence, which is referred to as geo-in, in support of national security objectives, supporting the Director of National Intelligence and a combat support agency supporting the Secretary of Defense.

- NGA never operates as a single entity, but instead works as part of a team responsible for many missions and operations worldwide.
- NGA supports a range of national priority issues including counter-proliferation, counterterrorism, homeland security, disaster assessment, arms transfers, port security and navigation.
- NGA partners with 81 organizations at 150 locations, including all the major combatant commands, national intelligence agencies, and the service intelligence centers.
- Geo-in encompasses topographic, bathymetric<sup>2</sup>, geomagnetic, gravity, mapping, charting, and geodetic survey data.
- Geo-in leverages remotely sensed imagery from across the electromagnetic spectrum. Electro optical, infrared, radar, multi-spectral, hyper-spectral, and LIDAR and motion imagery. Analysts at NGA transform complex, spatial, spectral and temporal information into actionable intelligence.

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<sup>2</sup> Bathymetry is the study of underwater depth.

The NGA's partnerships allow the agency to provide global maritime geospatial intelligence in support of national security objectives, including safety of navigation, intelligence activities and joint military operations.

- The agency maintains one of the most comprehensive maritime databases in the world, the Digital Nautical Chart (DNC).
- The database includes critical foundation data on sea lanes, anchorage areas, port data and environmental information equivalent to about 5,000 charts worldwide.
- NGA provides many products to enhance maritime domain awareness, such as worldwide sailing directions, the world port index, worldwide warning service broadcast messages with information on threats to shipping, piracy and maritime closure areas.
- NGA also combines digital terrain elevation data from the space shuttle radar topography mission with global shoreline data extracted from Landsat. By comparing those data sets with our digital chart data, NGA is able to determine the accuracy of the data worldwide.
  - NGA is also using high resolution commercial imagery to improve the accuracy and currency of harbor charts.

Investment is needed in the acquisition and maintenance of central foundation data to achieve the aims of maritime domain awareness and to support operations.

- NGA's data comprise the most comprehensive, but far from perfect, maritime information available.
- Data has been compiled from thousands of sources and foraging an interoperable global view from dozens of local surveys and literally hundreds of vertical datums.
- Large areas of the ocean have not been adequately surveyed, and traditional survey techniques are expensive and time consuming.
- In many areas of interest access is either denied or restricted.



- In well surveyed areas, critical features can change rapidly in this dynamic environment. For example, the *U.S.S. San Francisco* struck an uncharted seamount in 2005. When NGA undertook an effort to use multi-spectral imagery to locate and chart new shoals, the agency discovered 23 additional uncharted shoals.

## Dr. Robert D. Hormats

The following presentation pertains to two important issues: the commercial and security issues that relate to globalization, the maritime and the military; and the budgetary constraints the military will face over the next decade.

- Energy security is critically important. Oil is increasingly located in a few strategic parts of the world and the markets for that oil are widespread around the world.
- Transferring oil from where it is produced to the location of the demand is a formidable task.
- Countries with increasingly high demand, such as India and China, are actively engaging in resource diplomacy. A good portion of Chinese diplomacy is focused on oil and other commodities.
- China fears that the U.S. will use oil as a strategic weapon against China. The United States possesses a very formidable blue water navy, and the Chinese fear that the U.S. may interdict the supply of oil in the event of a confronta-

tion. This is one reason why the Chinese are developing a capacity to protect the sea lanes.

- The United States should reach an energy understanding with China in order to alleviate China's threat perception and to avoid potential conflicts.
- Since the globalized interdependent economy can have a "ricochet effect", the United States not only has to protect oil imported to the U.S. but also to secure energy supplies elsewhere. A disruption of oil to a country such as China or to Western Europe or Japan would also have an effect on the United States.
- As Steven Flynn already highlighted, high efficiency, with respect to just in time inventories or just in time deliveries, imposes a high degree of risk with respect to an interruption of supplies.
- U.S. policymakers and decision-makers need to explain to the American people where the oil originates and the role the Navy plays in protecting it. For instance, many Americans are not aware of how much oil the U.S. receives from West Africa. The United States imports about as much from West Africa as from the Middle East. Despite this U.S. dependency, fewer ships protect that volatile area as the Navy focuses on the Middle East. The challenge facing the military is how to allocate forces to secure this increasingly important supply of oil and to make sure that it is not disrupted.

As for the budget, troublesome historical trends risk surfacing in the near future.

- After every major war, particularly wars that end poorly, there is a negative reaction, which is to cut the defense budget.
- Resource allocation is a politicized process. Need and risk have not been the priority, rather the power of individual members of Congress or individual groups often can influence resource allocation to the benefit of their respective constituencies.

- The circumstance in which this war is fought is like no other past wartime. The U.S. has had a tax cut and an increase in domestic spending. The war has largely been financed through budget supplementals, and that borrowing has come largely from foreign sources.
- In every past war, the U.S. has increased taxes to pay for the war. During World War II, Roosevelt cut back New Deal programs and during Vietnam only approximately a fifth of the war was financed by supplementals.
- Americans have not been engaged in the process of paying for this war and as a result have been led to believe that America can achieve security inexpensively.

I offer three points as a means of concluding this presentation.

- One, the demands on the budget will increase in the future as the cost of entitlement programs grows. In order to avoid national security budget decreases due to policymakers not wanting to increase taxes or borrow money, the American people need to be educated as to the military's role in the world and the indispensable importance of the seas and U.S. maritime forces to our security and economy.
- Second, Americans need to understand that supporting a military costs money and the job cannot be completed by supplementals.
- Third, as a society, we must have a national discussion regarding the prioritization of all the demands on the budget. If we fail to have such a discussion, there is a risk of cuts in the defense budget, which directly has an impact on national security and the ability of the U.S. Navy to protect our maritime interests.

## **Rear Admiral William P. Loeffler**

Globalization has produced three effects of direct importance to maritime strategy: the growing interdependency of world markets and economies, increasing global competition for energy and resources, and the spread of violent ideologies and securi-



ty threats that place in jeopardy critical interests of the United States, our key allies and partners.

- Most governments derive legitimacy from economic growth and stability. A large part of this growth comes from vital sea-based transportation networks, the very same networks that are used to spread weapons of mass destruction (WMD) technology and expertise.
- The U.S. must avoid assuming a mainly reactive posture and instead focus more on the long-term, non- and counter-proliferation efforts of combating WMD since the global economic system is not only robust but also vulnerable.
- To accomplish such a mission, emphasis needs to be placed on nonproliferation and counter-proliferation for combating WMD as we presently do on the counterterrorism aspects.
- Because proliferation is a global issue, strengthening alliances is critical for success.
- A major challenge in preventing and countering proliferation is that many WMD related industries and technologies are dual use, which creates a significant challenge to determine intent and possible uses.

Numerous nonproliferation policies and institutions exist. However, the changing global economy drives the requirement for a more aggressive approach to proliferation, specifically counter-proliferation and a maritime strategy. An increased emphasis on counter-proliferation and an updated maritime strategy will make significant advances towards addressing the long-term threat of WMD acquisition or use.

- Deterrence is a key aspect of WMD counter-proliferation. The validity of the perceived weakness of international institutions has profoundly altered the national security landscape. Therefore WMD counter-proliferation needs to be reexamined.
- Doing so will save lives and money. Dealing with the events in a nonproliferation or a counter-proliferation continuum

is often less costly than dealing with consequence management after the event.

- A key aspect of counter-proliferation is interdiction. A maritime strategy that highlights the importance of maritime forces and their supporting role for the acquisition of actionable information in the maritime domain will go a long way towards enhancing the success of the interdiction mission and subsequently strengthening the role of deterrence in preventing and combating WMD.
- Several missions can be executed in the maritime domain to help collect information and deter proliferators: gathering manifest and destination information through the simple act of stopping and boarding ships in high interest lanes and response to overt tracking by merchant vessels, by navy vessels or the over-flight by military aircraft can add valuable insight into the intentions of a vessel of interest.

Counter-proliferation success in this age of globalization requires both domestic and international strategic partnerships.

- Domestically, no single U.S. government agency or department can counter the proliferation of WMD and related materials, delivery systems, particularly those dual use components and technologies.
- Internationally, no single government can effectively discourage, prevent, roll back, or deter WMD proliferation by either state or non-state actors. PSI is a good example of a policy initiative that creates international, multiagency global relationships.
- In addition to PSI, there are international venues to facilitate counter-proliferation of WMD such as the enforcement of the United Nations Security Council resolutions.

Maritime success requires the U.S. to leverage fully not only the capabilities of the naval services, but also to use the maritime domain to make full use of all aspects of U.S. government power. Focusing on counter-proliferation through interdiction and deterrence, two of the tenets of the National Strategy for



Combating Weapons of Mass Destruction, will reduce the necessity of dealing with the aftermath of a rogue state or a non-state actor employment of WMD. The inclusion of the counter-proliferation pillar in the new Maritime Strategy will increase its viability in the dynamic global economic environment of the 21<sup>st</sup> century.

## Vayl S. Oxford

The Domestic Nuclear Detection Office in the Department of Homeland Security (DHS) was established in April 2005 when the interagency decided that there was a need for comprehensive focus within the U.S. government on combating nuclear terrorism.

- The goal was to create an interagency office that was comprised of employees from DHS, the Department of Energy, the Department of Defense, FBI, the Nuclear Regulatory Commission, and the State Department.
- The office's mission was to formulate a global strategy on how to deal with the potential import of nuclear weapons or radiological material into the U.S.
- To begin, the office examined several points including a layered strategy dealing with materials overseas, PSI and like activities, and what a domestic architecture needed to look like to enhance our overall security.

DHS has instituted several programs to detect possible radiation in cargo shipments.

- DHS has deployed over 1,100 radiation detection systems to the major seaports and land border crossings.
- At present, over 90 percent of all incoming cargo shipments into the United States are scanned. By the end of 1997, over 97 percent of all maritime cargo transiting the top 22 U.S. seaports will be scanned.
- The President recently signed the recommendations of the 9/11 Commission mandating that the U.S. have the capability in place within five years to scan 100 percent of cargo containers overseas before they embark to the United States.
- Such an objective is ambitious yet important to our security. 143 countries via 704 ports located around the world ship to the U.S. DHS already scans over 22 million cargo containers per year that enter the U.S. This includes containers arriving in our ports as well as those shipped across our land borders.

Cargo security represents only one facet of DHS's concern. Several other initiatives touch on critical areas of interest.

- The Secretary of Homeland Security, in conjunction with my office and the Coast Guard, initiated a small maritime pilot program targeting small vessels, which possess the potential for bringing threats into the U.S.
- Another small maritime pilot program is geared to examining the deployment of radiation detection equipment within the Puget Sound area.
- DHS is helping to improve interagency and interdepartmental cooperation by using the captains of the port and Area Maritime Security Committees to bring together various local law enforcement communities. Such dialogue enhances the overall ability to detect and interdict threats before they reach our ports.
- DHS plans to extend the pilot program to San Diego and help protect our major naval presence there. Afterwards, DHS will examine the viability of expanding to other seaports that handle high volume traffic.

## Rear Admiral Kurt W. Tidd

- Terrorists have openly declared their ambition to acquire WMD and use such weapons against the U.S., U.S. allies, and against the deployed forces and American interests around the world. In addition to actively trying to obtain this capability, the terrorists are also developing a rationale to legitimize the use of such weapons. This is a real and serious threat.
- In response to the threat, the United States has taken aggressive measures to deny terrorists access to the WMD-related materials as well as to the equipment required to produce a weapon and to the expertise that is required to develop it.
- The United States must enhance these efforts in order to stay ahead of this dynamic and evolving threat.
- The U.S. will continue to pursue the senior leaders of terrorist groups, such as al Qaeda. Furthermore, we will maintain a broad range of activities that are required to identify, to disrupt and to counter the networks of these suspected terrorist threats. Also, we will continue the diplomatic campaign enhancing deterrence and building on a global alliance against WMD terrorism.
- The U.S. must expand the counter-proliferation and non-proliferation efforts aimed at denying terrorists access to these weapons and to weapons usable material.

The counter-proliferation and counterterrorism communities look at the world through fundamentally different prisms. In order to fuse them, one needs to recognize the differences and to build on their complementing features. This we have begun to do. We have been able to leverage their respective strengths.

- The counterterrorism world tracks people. Counterterrorism specialists use tools such as forensics and finance to identify and track



suspects. The WMD capabilities of terrorist groups are generally not known but the intent of these groups remains well known.

- The counter-proliferation world tracks state WMD programs. Specialists examine networks, transfers of money and material, remaining focused on assessing a state's capabilities. The community has a good sense of what a state's capability is but does not know exactly what the intention is.
- Blending these two communities together increases the knowledge of the enemy. The nexus between legitimate and illegitimate commerce is at the heart of the movement of much of the material.

State and terrorist WMD programs differ in characteristics.

- National WMD programs generally have military specific goals. The state spends a significant amount of time and funding on the research and development of the weapons program and has large amounts of infrastructure and personnel and seeks to cause mass casualties.
- Most of the known terrorist WMD programs have limited funding, very few operatives and take an opportunistic approach to the development and employment of their capabilities.

The National Security Council (NSC) has formulated a comprehensive approach to deal with this threat across all of the elements of national power. The NSC focuses on six key objectives.

- First, to determine terrorists' intentions, capabilities, and plans to develop and acquire WMD.
- Second, to deny terrorists access to the materials, the expertise and the other enabling capabilities required to develop WMD.
- Third, to deter terrorists from employing WMD. Terrorists, or the entire supply chain facilitating terrorist acquisition of WMD, can be deterred. Each individual or element of the terrorist supply chain may be influenced by different deterrence strategies.

- Fourth, to detect and disrupt terrorist attempted movement of WMD related materials, weapons and personnel.
- Fifth, to be able to prevent and respond to an actual WMD terrorist attack.
- Sixth, to define the nature and source of any terrorist employed WMD device after the fact.

Focusing on the threat posed by terrorists eager to develop a WMD capability has significant implications for a maritime strategy.

- The U.S. must spearhead the move to create a coalition of countries that are interested and determined to combat WMD terrorism.
- The skill sets necessary to counter this threat remain those of direct relevance to maritime forces. A wide variety of countries are interested in participating and contributing to this effort.
- Past experience illustrates that building coalitions with maritime forces is relatively easy. Maritime forces work together frequently, and share many common procedures and experiences.
- Maritime forces can operate flexibly in the global information grid. Because of their widespread presence, maritime forces are well suited to conduct maritime scouting. Such scouting is sea-based, overt, HUMINT collection.

## Analysis

Session 2 examined issues regarding globalization including the increasing economic, trade, social, technological, cultural, and political interdependence, integration, and interaction among nations, people, and corporations around the world. Globalization has produced three effects that drive maritime strategy: the growing interdependence of world markets/economies; increasing global competition for energy and energy sources; and the spread of violent ideologies and security threats that place in jeopardy critical interests of the United States and its key allies and partners. The Panelists discussed: U.S. security considerations including



sea lane/port security; energy security and infrastructure protection; non-traditional security concerns (especially terrorist- and WMD- related); their implications for maritime security missions across the spectrum of operations; leveraging additional U.S. interagency and international frameworks to secure the global maritime commons; and space as a 21<sup>st</sup>-century strategic arena and its implications for maritime strategy.

Globalization presents many challenges to those interested in securing the maritime environment. The ease with which one communicates and travels both enhances society and the capabilities of society's enemies. Terrorism constitutes a major threat to the U.S., its interests and partners. The U.S. still has vulnerabilities that need to be addressed. Dr. Robert D. Hormats pointed out one such vulnerability on the New Jersey Turnpike outside of New York. Chemical plants storing fuel line the highway and provide a perfect target for terrorists. Admiral Kurt W. Tidd reminded the Panel that although a nuclear weapon in the hands of a terrorist poses a significant threat, one should not forget about the possibility of a chemical or biological attack.

The Panelists discussed and elaborated upon several recent efforts by the government to counter this threat. Vayl S. Oxford highlighted DHS's pilot programs and the goal of enhancing the ability to deal with the threat posed by small vessels. Mr. Oxford assured the Panel that DHS is not only taking steps to safeguard naval assets but also to protect key civilian maritime assets as well. Admiral Tidd expanded during the discussion period upon his earlier presentation concerning deterring members of the supply chain as a means of deterring suicide bombers and others inclined to use or facilitate WMD proliferation. Admiral Tidd stressed the importance of targeting and developing deterrent schemes for the "scientist who might be tempted to contribute his technical expertise, obviously a state supporter or facilitator who might be interested in turning a blind eye to the transshipment of goods." The individual apocalyptic terrorist may be difficult to deter, although that possibility should not be dismissed, but the supply chain providing the terrorist with WMD may pres-



ent gaps and opportunities for an effective deterrence strategy to work, by targeting the right people and elements in the chain.

In such a globalized maritime environment the importance of partnerships cannot be overemphasized. Dr. Hormats stressed the criticality of reaching out and partnering with other states such as Japan, and even with future peer competitors such as China and India, in order to leverage the common interest in maintaining the security of sea lanes and freedom of the seas. By doing so, suggested Dr. Hormats, the United States can significantly reduce the possibility of a future misunderstanding that may lead to confrontation.

## *Luncheon Address*



### **Vice Admiral John G. Morgan, Jr.**

The process of developing a new Maritime Strategy was initiated by thoroughly reviewing the strategic environment.

- In order to construct a comprehensive strategy, key trends and uncertainties over the course of the next twenty years needed to be identified.
- Surveying the strategic environment involved analyzing already existing work concerned with the strategic environment, such as the National Intelligence Council 2020 Report, the Joint Operational Environment, and the Center for Strategic and International Studies Seven Futures Project.
- Reviewing these works enabled the creation of a baseline of agreed upon trends and uncertainties without duplicating existing insights.

Following the survey, a discussion concerning the key uncertainty, what will be the next U.S. grand strategy in foreign policy, ensued.

- Instead of trying to formulate a single answer we considered a range of options: primacy, cooperative security, selective engagement, and offshore balancing.
- In addition to these possibilities, we added two other alternative futures for consideration. The first is a concert of power whereby all the major players agree that the current status quo is in their best interest and needs to be preserved. The second is a coalition of denial, meaning everybody will act in opposition to the United States.
- The next step involved discussing representative maritime strategies that would fit all six of those alternative futures. Five maritime strategies emerged as viable candidates. We then reduced the number further to the three strategies that we felt best suited our national identity and consistent with the foreseeable directions that our foreign policy might take.
- After narrowing the selection to three, we sent each strategy option to members of the Navy, the Marine Corps, and the Coast Guard, for review and to provide us with input as to how to improve each strategy. The core team of writers then incorporated the suggested enhancements into the existing options.
- Once this task was complete, we sent the options back to the fleet and asked three questions. First, which option best corresponds with your view of the world? Second, what have we left out of the option you chose? Third, which aspects of the other options do you wish to see incorporated into the option you chose?
- The final product was prepared for signing by the Chief of Naval Operations, the Commandant of the Marine Corps and the Commandant of the Coast Guard.

The development process of the new Maritime Strategy has been open and inclusive.

- The document is unclassified.
- We accepted input offered by our international partners through constructive dialogue.

- The document reflects a high level of cooperation among the maritime services.

## Analysis

The process in which the Navy, the Marine Corps, and the Coast Guard developed the new Maritime Strategy was comprehensive and inclusive. The effort did not call for a few hand-picked individuals to create a document for the Navy's sole use, as the nation's largest and most powerful maritime service. The document reflects the cooperative efforts of all three maritime services and numerous people from a variety of backgrounds, expertise and rank, in addition to foreign and commercial partners.

The new Maritime Strategy is meant for both the American people and the Congress. The purpose of the strategy, as Vice Admiral John G. Morgan professed in the discussion, is not to influence or change minds, but rather to explain the role of sea power, in simple terms, within the greater context of national power and American interests. Issues, such as the global supply chain, energy security, preventing wars that cannot be won and global economic disruptions, need to be explained to the American people in a manner that can be understood. The point of the document is to be accessible, both in its development by those qualified to contribute and in its final form as a product to be shared with policymakers and the American people.

Vice Admiral Morgan asserted that the new Maritime Strategy, for all that it does mention and suggest, fails to argue for a unilateral approach to maritime security and achieving other American maritime objectives. If anything, the new Maritime Strategy stresses that the United States cannot proceed alone. Vice Admiral Morgan argued that there is a broad international interest in preventing wars; especially ones that could potentially disrupt maritime activities, such as trade, because of the impact such a conflict would have on the interdependent global economy and consequently our national interests and economic well being. Cooperation in the maritime area is essential if we are to avoid such scenarios.

## Session 3

# Operational Challenges



## Stephen M. Carmel

This presentation is built on a theme discussed in the opening session and evident throughout the conference—the need to involve the private sector as fully as possible in efforts to secure the maritime domain and implement the new Maritime Strategy. Much remains to be done to achieve this goal.

- Commercial shipping maintains a global presence. The industry is in far larger numbers on the world's oceans than most appreciate.
- The Maersk Global Shipping Group operates a fleet of over 1,000 ships. Within that total is a fleet of 550 container ships.
- Maersk's container fleet operates in 300 ports around the world making 33,000 port calls a year.
- The number of all surface combatants in the world greater than 2,000 tons displacement at the end of 2004 numbered 574. This demonstrates that the inventories of all the world's navies combined that are available to implement the new Maritime Strategy are less than Maersk's fleet.
- The density report available through AMVER, a voluntary global partnership administered by the U.S. Coast Guard of seagoing interests working collectively for self preservation in the hostile sea environment, illustrates the domination of global maritime commerce by commercial shipping. 17,000 ships from over 155 countries currently enroll in AMVER and it tracks 3,200 active voyages on any given day.

As a result of the commercial shipping community's persistent global presence, it understands the maritime environment. Due to their different roles and missions, private industry and the Navy view the maritime world differently.

- Private industry is aware of numerous vulnerabilities, such as port infrastructure, that exist in the maritime domain. Unlike many descriptions found in the pages of maritime strategies, the commercial shipping community fails to see a threat. Threats differ from vulnerabilities.
- The only threat to maritime commerce remains the ill conceived security measures that fail to understand the fundamental way that the globalized transportation system works.
- Disruption to the system is not only inefficient, but also extremely problematic to the overall shipping system. Any strategy that fails to consider that aspect of shipping will do more harm than good.
- Due to our global presence, commercial shipping has good standing to assess the environment, and we are not convinced of an impending threat.
- Piracy, for instance, is not a positive action but it also fails to constitute the grave threat to the industry that some portray. The shipping community has always dealt and will continue to deal with bandits, thieves, and piracy in particular areas. The statistics regarding piracy are skewed, often conflating different types of behavior under the piracy umbrella, thus giving a false impression of the problem and whom it targets.
- Stowaways, on the other hand, are a major concern for both the commercial shipping community and the government.
- Also, the commercial shipping community holds mixed perspectives regarding transparency. For example, vessel position is a source of competitive advantage and leverage in negotiation with cargo interests. Another reason for opposing transparency is, for example, a potential future

conflict between China and the U.S. with oil interdiction emerging as a possible weapon. Tankers could be easily targeted for interdiction.

- Such opposition does not indicate an unwillingness to cooperate and help enhance maritime domain awareness. Maersk is already testing innovative maritime domain awareness technology developed by Lockheed Martin. Maersk offers training platforms that the Navy, Coast Guard and various law enforcement agencies have taken advantage of in the past.

## **Lieutenant General Richard F. Natonski**

The Marine Corps faces several operational challenges.

- The threat of global terrorism.
- The persistent fear of nuclear proliferation.
- A global race for securing access to resources, from fresh water to fossil fuels.
- The rise of peer competitor powers.
- The demand from regional combatant commanders for a persistent forward presence.
  - The Marine Corps is developing a new concept called Security Cooperation Marine Air-Ground Task Force (MAGTF) to better serve the regional combatant commanders in dealing with enemy threats as well as phase zero operations.
  - Combatant commanders need to improve regional relations in order to enhance access to areas of interest, including areas of restricted access where humanitarian assistance may be needed.
  - As with other branches of the military, budget challenges are ever present. One can have the best strategy in the world, but if one does not have the means to implement it then the strategy is not meaningful.

The CENTCOM Area of Responsibility (AOR) remains one of the biggest challenges the Marine Corps faces today.

- The Marine Corps is involved heavily in Operation Iraqi Freedom and Operation Enduring Freedom in Afghanistan.
- Resulting from the magnitude of the operations, the high demand, and a fast operational tempo, the Marine Corps is unable to meet the combatant commander's demands across the world.
- Due to present needs and availability, the Marine Corps is not utilizing or training the wide range of capabilities at its disposal. When troops return home from tours in Iraq and Afghanistan, they spend the seven months between tours focusing their training on counterinsurgency operations. We have not had the ability to practice the full spectrum of skill sets. Surprisingly, there are lieutenants and captains in the Marine Corps that have never been on an amphibious ship.

In order to manage demands and fill gaps, the Marine Corps is growing by 27,000 to an overall force strength of 202,000.

- The Marine Corps plans to grow by 5,000 a year without sacrificing quality or lowering recruiting standards.
- By increasing the size of the service, marines will hopefully be able to spend more time at home than on deployment. In addition to training for counterinsurgency operations, the Marine Corps hopes to train for the wide range of amphibious capabilities the Marine Corps offers the military.
- The troop increase will also provide better balance for the Marine Expeditionary Forces worldwide.
- In addition, such a development also better postures the military for the long war in the Middle East.

Another major challenge remains our ability, in terms of maritime strategies, to deter the enemy and win our wars.

- The Marine Corps has always provided the country with its premier forcible entry capability.
- In today's environment of anti-access technologies and missiles firing from the beach capable of hitting and damaging ships, a central question is what does the Corps need to retain a forcible entry capability?



- Launching amphibious assault vehicles from a mile off the beach is no longer applicable.
- New technologies and vehicles are being developed and deployed, such as the V-22, which enable marines to travel over a hundred miles inland, retaining the ability to maneuver from the sea without confronting the enemy's coastal defenses.

## Rear Admiral Dan W. Davenport

The Joint Forces Command (JFCOM) Joint Concept Development and Experimentation (JCD&E) Directorate (J9), as a global force provider, trainer, experimenter and integrator, is uniquely positioned to understand and support the development of concepts that posture the maritime force to best support the JFCOM commander.

- Through the collective work of the JCD&E enterprise, we find solutions for the challenges identified by our customers.
- Working with our partners, the JCD&E addresses the most demanding problems facing the Joint Force in the near, mid and far term.
- The JCD&E is currently involved in a number of efforts that directly apply to the development and implementation of the new Maritime Strategy.

Three areas of focus, cooperative security and engagement, maritime domain awareness, and cross-domain information sharing, are of particular relevance to the new Maritime Strategy.

- Partnering with the U.S. European Command, JCD&E is nearly finished with a joint operating concept titled Defense Contribution to Cooperative Security Engagement (CSE).
- CSE aims to enhance regional security in order to prevent and mitigate crises through the integrated efforts of a broad spectrum of U.S. and international partners.
- The CSE concept highlights the broad effects and capabilities that will enable the geographic combatant commanders to build multilateral relationships, enhance capacity and

capability of partners, and establish the mechanisms to share critical information.

- We expect the CSE concept to be approved this year and shortly thereafter begin working to implement the concept through a series of limited objective experiments in SOUTHCOM, PACOM, EUCOM and AFRICOM.

Maritime domain awareness is a key component in our nation's defense. An enhanced maritime domain awareness greatly improves the military's ability to defend the homeland. Maritime domain awareness is an area of focus within the JCD&E enterprise that brings together the COCOMs, interagency, NATO, multinational partners, industry, academic institutions, nongovernmental organizations, and state and local governments.

- Such an effort requires effective integration and sharing of maritime situational awareness and intelligence. Information interoperability is the critical ingredient for success
- A great deal of information vital to maritime domain awareness is in open source and commercially held repositories. Obtaining that information and integrating it into our system remains one of our biggest challenges.
- The three biggest challenges facing maritime domain awareness are the following: a cultural propensity opposed to sharing; internal policy restrictions and perceived information constraints; and limited interagency interoperability which is compounded by multiple classification systems.
- The JCD&E community and environment have much to offer in terms of overcoming these challenges, such as a recent experimentation series on sense making in the maritime domain. The series explores the cognitive processes and supporting capabilities required for making decisions in a maritime domain awareness context.

JFCOM developed a prototype called Cross-Domain Collaborative Information Environment (CDCIE), which begins to address information sharing issues.

- CDCIE provides a bidirectional, cross-domain multinational information exchange environment, which applies

nonproprietary open standards to communication capabilities across classified, unclassified, and different national systems.

- Cross-domain multi-user text chat includes language translation enabling multinational information exchange across security domains.
- When fully developed, this cross-domain collaboration capability could be a key enabler for multinational information sharing.

## Rear Admiral Brian M. Salerno

The new Maritime Strategy represents the first time in our nation's history when the three maritime services collectively formulated an application of our nation's sea power for the purposes of achieving our national interests. The Coast Guard remains committed to fulfilling its obligations as part of the team to provide the nation with the maritime security that its citizens expect and deserve.

- Commercial shipping is the focal point of the global economy. Many products sold in markets, even in landlocked countries, traveled at some point in their journey to the marketplace by sea.
- The global system of trade includes finance, information, laws, people, and a system of governance that is vital to international peace and prosperity.
- As a result of the interdependence of the global system, the U.S. must possess the ability to influence events anywhere in the system. Sea power empowers the U.S. with such a capability.

The Coast Guard offers unique and complementary capabilities and competencies that contribute greatly to the projection of U.S. sea power.

- The Coast Guard remains first and foremost a military organization but is also a law enforcement organization, able to communicate and operate jointly with both the Department of Defense and civilian agencies.

- Coast Guard platforms are multi-mission capable. The Coast Guard uses a military command and control system and can readily accept and integrate assistance from other military services, such as in a response to a national disaster or an emergency.
- The service also serves as a link between the Department of Defense and non-Department of Defense agencies, such as Customs and Border Protection and FEMA.
- The Coast Guard builds and maintains numerous bilateral relationships with coast guards, navies, and relevant ministries from around the world. Since 2000 the Coast Guard has worked with Japan, China, Canada, Korea and Russia as part of a North Pacific Coast Guard forum. Due to its success, a similar organization focusing on the Atlantic is beginning operations.
- Although not widely acknowledged, the Coast Guard has a critical role in power projection and forward presence. The Coast Guard operates the nation's icebreakers; the only surface ships in the U.S. fleet that can safely navigate in ice covered Polar Regions. These ships provide a national presence in support of a variety of U.S. interests.
- The Coast Guard has extensive capability and expertise in disaster response and humanitarian assistance and has long-standing partnerships with civilian response agencies.
- The Coast Guard also operates in forward areas, such as Guantanamo Bay, providing boats for patrol duties in the Persian Gulf, and other special security operations.
- The Deployable Operations Group (DOG), a recently commissioned command in the Coast Guard, serves as a force manager for all of the 34 deployable specialized units.

## Rear Admiral Jacob Shuford

The new Maritime Strategy's development and production process exposed several challenges that differentiate this strategy from previous works.

- Unlike the Cold War, there can be no clear presumption of a state-centered enemy.
- The modeling and scenario building available that was helpful in the 1980s, when everyone understood the rules of the game and all parties more or less grasped each other's intentions and capabilities, are less helpful today. To test the value of and to execute the new Maritime Strategy will prove much more difficult in today's world where we find ourselves neither fully at peace nor fully at war.
- The new Maritime Strategy is pioneering because it calls for the application of maritime force as a continuously applied strategic implement and not as a reserve or a marginal piece of a larger national effort.
- Finally, the new Maritime Strategy is not a contingent strategy, meaning that it does not wait to go into effect until there is an attack or an imminent attack, as with past strategies. The new strategy is proactive and recognizes the centrality of maritime forces in maintaining the global system.

The services will face four key challenges when implementing and making the new Maritime Strategy operational.

- First, the threats presently facing the nation are complex, forcing the services to reexamine operational concepts, force mix and structure requirements. Once mastered issues, such as escalation, de-escalation, and deterrence, necessitate a reevaluation and mastery of these concepts within the context of the complex and rapidly changing environment of the 21<sup>st</sup> century. Since the fall of the Soviet Union, these issues have experienced a decline in intellectual energy. We must begin looking at these issues again and the services would benefit greatly from a more concerted effort to ask the right questions and to understand previously well understood concepts in relation to current threats within today's interdependent world.



- The second challenge regards sea based or maritime missile defense. President Reagan had a vision of making deterrence more defensive and the Navy has had significant successes in fulfilling this mission.
  - Sea based missile defense accounts for the most flexible and mobile protection element of in-depth missile defense available to deter and dissuade others from using ballistic missiles to coerce or threaten allies or the United States.
  - The maritime forces sustain the defensive capability.
  - The U.S. government needs to support the services in the development of a range of defenses which prove adequate against the growing foreign arsenals of ballistic missiles.
- Third, the new Maritime Strategy relies on the strength of interagency and international partnerships. Providing homeland defense in depth means to identify and neutralize threats globally before they confront us here at home. To accomplish this objective requires a higher degree of cooperation with not only partner nations but also between U.S. government agencies, international organizations, commercial interests and nongovernmental organizations. This may also require a maritime headquarters in order to command and control maritime forces with strategic effects across regional boundaries.
- Lastly, we must understand what expertise is needed to implement the different facets of this strategy and develop the necessary expertise accordingly.

## Analysis

This session addressed issues such as force structure and modernization priorities, requirements for increased interoperability and connectivity among existing assets as well as identifying and developing the new capabilities that will be needed to support the new Maritime Strategy. Panelists discussed: core maritime capabilities; coordinating with the other military services and

interagency actors; developing new doctrine and operational concepts; engaging the private sector; exploiting net-centric communications capabilities; and funding the new force.

Due to the complexity of the threats that have surfaced in the 21<sup>st</sup> century accompanying more traditional concerns such as the rise of peer competitor powers, and given the growing interdependence of the global society and economy, significant operational challenges face those charged with securing the maritime domain. These challenges need to be identified and understood in order to implement the new Maritime Strategy effectively thereby making the strategy operational. The new Maritime Strategy differs from previous strategies in several key ways, which both highlight challenges and raise new considerations. The new Maritime Strategy is changing the way in which the sea services cooperate. The strategy serves all of the sea services and each has been integrally involved in its creation. Lieutenant General Richard F. Natonski and Rear Admiral Brian M. Salerno, representing the Marine Corps and the Coast Guard respectively, emphasized the participation and obligations of each of the services to contribute to and execute this strategy. As for operational challenges, threats from terrorism and rising peer competitor powers continue to challenge maritime security as well as the heightened interest in securing resources, particularly energy, which rely on the seas both as an acquisition source and as a transportation route. Securing access to the sea lanes in an environment which is already growing and rapidly evolving is operationally challenging. It requires improved maritime domain awareness, greater interoperability, improved cooperation with international partners and interagency participants, and allocating the proper funds to allow the new Maritime Strategy to materialize.

Stephen M. Carmel raised an issue that he characterized as the greatest security threat facing the commercial shipping industry: the institutionalization of ill conceived security measures that disrupt the global supply chain. Disrupting the global supply chain not only effects the private sector as an industry, but also trickles down to the individual consumer as disruptions in what

is already a highly cost efficient system cause costs to rise and produce possible economic consequences, such as asymmetric inflation impacting the lives of lower to middle class Americans, to occur. The private sector is eager to help the government with its new Maritime Strategy avert such a problematic situation and seeks greater involvement and participation. Furthermore, the commercial shipping industry is also interested in offering its resources and experience to the government in hope of helping the government achieve its strategic objectives. As articulated by Mr. Carmel, the private sector cannot act as an overt intelligence gathering agency of the U.S. government. However, the private sector can provide passive intelligence and data that can significantly improve maritime domain awareness. The private sector has much to offer the government in pursuit of implementing the new Maritime Strategy and its capabilities should be exploited and a partnership formed in order to overcome operational challenges.

The future of the defense budget remains questionable. General Natonski warned that there is a possibility of a decline in military funding. According to General Natonski, such a cut would be a mistake if one hopes to implement and transform the new Maritime Strategy from a concept into an operational reality. Despite the concern, addressing the issue of a looming breaking point amidst all of the threats and financial demands and constraints placed upon the services raised in the discussion period, General Natonski was optimistic. He reminded the Panel that Americans in times of crisis have risen to the occasion to achieve the strategic objective. He cited World War II and how the United States was not prepared when the Japanese struck Pearl Harbor, yet Americans quickly identified the problem and worked together to not only face the enemy but also win the war.



## Session 4

# *Finding the Proper Operational Mix*



## Lieutenant General James F. Amos

The new Maritime Strategy reflects possible future geopolitical realities. The new Maritime Strategy accounts for alternative futures that may arise, such as an environment in which all major powers agree that the status quo needs to be preserved, actors acting contrary to the U.S. simply to oppose U.S. action, and whether the U.S. will focus on retaining its naval supremacy or will it emphasize cooperative security. The world in 2025 will be consumed by a wide spectrum of conflicts and tensions. The rise of peer competitor powers will challenge the United States and its naval supremacy. Non-state actors will continue to threaten maritime security and the fear of WMD proliferation will be ever present. Competition for energy resources will be fierce and the interdependent economy will continue to rely heavily on open and secure sea lanes. Preventing conflicts and overcoming security challenges will require robust maritime forces. The primary responsibility of the United States Navy is to prevent and win wars, which is the cornerstone of any naval maritime strategy.



Two imperatives enable the U.S. Navy to fulfill its primary mission objective: access and influence.

- Access is emerging as a troublesome issue and difficult to secure in today's geopolitical environment. The U.S. is presently in competition for access around the world.
- In the 1990s the United States conducted military operations in the Balkans. The U.S. military was able to use bases and airfields in the United Kingdom and Italy. We had carriers in place as well. The U.S. military in Operation Iraqi Freedom faced access difficulties. The initial plan called for the 3<sup>rd</sup> Infantry Division to enter Iraq through Turkey, yet access was denied. Access was also an issue when Task Force 58 entered Afghanistan through Pakistan.
- The military needs to develop the means to overcome these challenges.
- Influence is the second imperative enabling the U.S. Navy to prevent and win wars.
- The new Maritime Strategy informs us that wars are prevented by our ability to have naval forces forward deployed. Such deployment enables us to exert influence around the world.

Finding the means to execute these two imperatives remains a challenge. Sea basing is one possible component. Sea basing will help solve access issues. Sea basing lightens the burden on our friends, our neighbors, our allies, and it also helps to dissuade our adversaries.

## Seth Cropsey

The U.S. Navy is less than half the size it was during the Reagan administration and the implications of such shrinkage continue to escape serious, sustained attention at the national level.

- The current fleet of 274 combat ships is the same size as the Navy on the eve of World War I.
- If shipbuilding is sustained at seven vessels per year, the fleet will eventually be reduced to numbers equal to those achieved just after the Russo-Japanese War.

History serves as a reminder of what happens to great powers that forget their geography and the source and importance of their maritime power.

- Athenian military leadership argued to abandon Athenian land possessions behind an impregnable land-facing wall and survive on seaborne commerce defended by a powerful fleet, drawing on Athens' geography and unparalleled naval prowess. However, the strategy depended on Pericles and when he died the strategy lost its currency. Amidst a handful of land campaigns and good fortune, Athens challenged Sparta at her point of greatest strength, on land. Athens lost the battle, the campaign, and the Peloponnesian War. Athens continued to flourish as a cultural center, but her role as a great power was over.
- The history of Venice offers an additional example. Venice, surrounded by a lagoon and the Adriatic Sea, possessed Europe's most advanced and efficient shipbuilding industrial base. Venice's galleys and freighters called at ports from northern Europe to the eastern shores of the Black Sea, supported by a string of wisely-placed and well-defended logistics bases. Venice's commercial empire was defended by the Mediterranean's strongest navy. In the 15<sup>th</sup> century, Venice became involved in land warfare with other Italian city states. At the same time, the Ottoman Empire was establishing itself as a peer naval competitor. By diverting attention to land forays and away from the maritime source of its strength, Venice failed to protect bases in the eastern Mediterranean. Venice failed to respond to the changes in trade routes, ship design and international politics. As a result, the Venetian republic's position as the Mediterranean's preeminent naval power foundered once Venice forgot the maritime source of its strength.

The U.S. Navy's current effort to craft a new Maritime Strategy is a healthy sign of national strategic life.

- Naval forces are flexible enough to adapt to the changes that continue to occur in the post-Cold War period.

- Developing a comprehensive strategy has become more difficult because threats now emanate from increasingly strong conventional powers and increasingly dangerous unconventional sources.
- The United States needs to address both concerns, yet each problem may require different tools.

Elements of the strategic equation that do not change should also be taken into consideration.

- Except for its borders with Canada and Mexico, the United States is surrounded by oceans.
- The future of the world's growing commerce depends on safe transit through the seas.
- One of the most fundamental measures of great international power remains the strength of the nation's naval service.
- Shipbuilding costs continue to increase due to corporate mergers and inefficient government policy. Layoffs and the departure of skilled workers for other, more reliable employment have reduced our shipbuilding capacity and, as a result, the competitive defense-industrial base.

The United States will face the choice of maintaining its naval supremacy or yielding its position to others. Once lost, it will be very difficult to regain naval supremacy. Such a feat is unprecedented in history.

- Though there is no inevitability to enmity with China, we could strongly prejudice the case against a secure and balanced East Asia by creating a serious power vacuum if we were to remove our naval presence from the region.
- Russia is striving for the international recognition it once enjoyed.
- India is building a naval force to control the ocean bearing its name, through which much of the world's oil is transported.
- It is merely a question of time until jihadists attempt to use the seas as a more effective alternative to the air routes

whose assault has now been complicated by the counter-terrorist measures of threatened nations.

- The flexibility of a powerful and wide-ranging naval force offers protection for the civilized world against WMD in the hands of fanatics armed with long range missiles.

The Navy's current trajectory leads away from maintaining U.S. naval supremacy and predominance as the world's greatest maritime power.

- The nation's need for a large, powerful and responsive Navy is as changeless as our geography.
- If the United States seeks to remain a great power, it needs a fleet whose numerical size reflects this ambition.
- The Navy's renewed interest in maritime strategy acknowledges the power of ideas and the absent debate over this nation's maritime defense.

The future of the United States as a great power depends on a large world class Navy. This, in turn, requires modernization and growth, the control of shipbuilding costs, the rejuvenation of the industry and the ability to create and execute intelligent strategy.

## **Vice Admiral J.D. Williams, USN (Ret.)**

Ballistic missile defense (BMD) has been debated by policymakers, military planners, and the public since President Reagan's March 23, 1983 speech calling for greater research on defenses against ballistic missiles. The Navy's inclusion in the discussion began in 1991. After considerable opposition and a period in which the future of the system remained uncertain, the Navy has deployed a BMD System following an efficient and competent engineering development program.

- The Navy intends to equip 18 *Aegis* ships with the BMD capability.
- The number will grow to 65 as the destroyers receive their mid-life modernization.
- The Navy fields 7 Early Warning Ships in support of the Ground-based Missile Defense program.

- The test program has proven very successful having effectively intercepted 9 of 11 shots.<sup>3</sup>

Due to the success of the Aegis BMD Program, the Navy possesses the opportunity to make a significant contribution to Global Missile Defense. The Navy needs to inform the Office of the Secretary of Defense and Congress of its potential capabilities. The country needs the capability to reposition defenses in response to any type of threat that arises. The Navy's advantage of mobility over 70 percent of the world's surface allows it to position Aegis Ships along any future axis. The Navy should consider the following:

- Developing Aegis BMD as a Global Missile Defense System (including homeland defense). The working BMD system with the Standard Missile 3 Block 1A (SM3 Blk 1A) missile and with the approved development of the Block 2 missile, all the U.S. Aegis ships will have the capability of defending most of the globe, including all of the United States and its territories.
- Installing BMD capability into all Aegis ships. The Navy plans to install the BMD capability on 18 Aegis ships, but if installed on all Aegis ships the number increases to 84.
- Ensuring maritime domain awareness could enable the Navy to complete the objective of any sensor any shooter. An Aegis ship shooting off the track of a forward land based radar serves as an example of this capability.<sup>4</sup>
- Developing the Engage on Remote capability to allow Aegis ships to shoot off of any track from any radar that provides an accurate enough track for an intercept.
- Developing a Boost Phase capability to intercept most missiles in Boost, Post Boost, or early Ascent phase and destroy

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3 On November 6, 2007 the *USS Lake Erie* fired two SM3s that destroyed two ballistic missile targets high over waters near Kauai, Hawaii. At certain points in the operation all four systems were in the sky at the same time. This made Aegis BMD/SM3 successful eleven out of thirteen times in intercept tests and twelve out of fourteen including the terminal defense shot fired in 2006.

4 The SM3 missile's flight can surpass the Aegis radar range. If the SM3 could be guided by a land based radar in addition, the defended area can be increased by hundreds of miles.

warheads and/or decoys before they deploy, which constitutes the most opportune time to destroy the missile.

- Developing the SM3 Blk 2 System. As a result of the SM3 Blk2's increased velocity burnout, the Aegis BMD increases the "defended footprint." It can defend the homeland, thus emerging as the cornerstone of the Global Missile Defense system. The SM3 could emerge as sea based BMD Interceptor allies such as Japan chooses to deploy. U.S. and Allied Navies equipped with SM3 missiles and buttressed by BMD Sensors would become a tremendous asset in the Global Missile Defense. We must also explore using Trident Submarines as part of the Global Missile Defense System.

## Robert Work

The new Maritime Strategy is a reflection of the interdependent world of globalization that has emerged in the past fifteen years.

- Our national fleet is quite impressive, consisting of 456 ships when combining the ships available not only to the Navy but also the Coast Guard and Marine Corps. This number does not include the ships in the ready reserve fleet.
- Twelve aircraft carriers are operated by the United States.
- The United States possesses ten of the seventeen carriers that operate vertically launched aircraft.
- The Navy has more nuclear submarines than the rest of the world's navies combined. The U.S. Navy also has the largest combat logistics force fleet and the largest amphibious force fleet in the world.

The position of the Navy with respect to the present and projected global geopolitical reality may be less alarming than other critics have suggested for several important reasons:

- The threat to the global sea lanes is probably lower than at any time since 1890.
- 15 of the 17 largest navies are democracies who have a huge stake in making sure the global sea lanes remain open.

- If a serious threat to the sea lanes emerges, the U.S. alone would be able to deploy three or four hundred ships to counter the challenge.

The U.S. Navy must remain forward deployed at all times. It must always be engaged in efforts to keep the peace. Until recently, whenever strategists would discuss deployment strategies, the concepts have always been tied to a military.

- Even in the 19<sup>th</sup> century, we operated global fleet stations in the 19<sup>th</sup> century to support military operations.
- When we shifted to a battleship Navy, the maritime forces maintained a foreign presence with smaller ships while the big gunners remained at home ready to sail forward when necessary.
- During the Cold War, carrier battle groups, marine amphibious units, submarines—such forces were forwardly deployed to deter enemies and to respond immediately to crises.

The maritime services must be prepared to face several types of situations and challenges:

- In the past, whether it was the Imperial Japanese Navy or the Soviet Navy, the U.S. faced a clear enemy to plan against. Today, the naval threat is much less obvious.
- In the past, the U.S. would design the fleet for the worst case big war, yet the present naval threats are diffuse and the blurring of operational requirements and the operational mix that we choose is perhaps more important than at any point in our history.
- The military must be strong enough to underwrite the evolving expeditionary posture. The number of forward operating bases will continue to decrease, as it has been since the collapse of the Soviet Union, pressuring forces participating in future fights to travel great distances by sea. Therefore, sea control will be as important as ever because of the enormous advantage such control provides us in global freedom of action. The ability to transport by sea and deny our enemies the same privilege is a capability we do not want to lose.



- The 2006 Quadrennial Review listed the four operational problems the President has asked the Navy, the Marine Corps and the Coast Guard to be prepared to counter: defending the homeland in depth; fighting the Long War; preparing for a world of additional nuclear powers; and shaping the strategic choices of countries in ways that accord with our interests.
- Because it seeks great power status, China will need to build a great navy. The United States is not preordained to fight the Chinese Navy but the United States should be prepared to meet a potential future challenge.
- The Navy has declared that it seeks to increase the number of ships in the fleet to 313. If the Navy needs to build more in order to respond to a major global crisis, it will do so. For now, the Navy should concentrate on increasing to its currently projected levels before authorizing future increases in fleet size.
- The Marine Corps and the Navy need to return to working as a team. During the Cold War, the two services drifted apart with the Marine Corps focused on expeditionary readiness and the Navy on strike capabilities. The maritime services, including the Coast Guard, must return to a relationship in which each complements the others with all working together jointly in synergistic harmony.

## Analysis

Session 4 examined issues directly related to achieving a balanced configuration of maritime forces to cover the spectrum of likely contingencies set forth in previous sessions (e.g., marine and littoral combat platforms as well as capital ships for blue water operations and forward presence). This session also addressed maritime force structure requirements in an era in which we face state as well as non-state actors, including maritime requirements for combating terrorism. Issues the Panelists addressed included: maritime forces as enabler of Jointness; missile defense; rationalizing force structure, reviewing acquisition priorities; identifying

resource needs; and educational and training requirements for a new Maritime Strategy.

When analyzing the requirements for a proper operational mix, an alarming disconnect emerges between available capabilities and the demands of the maritime services in the future. Threats such as terrorism and nuclear proliferation show no signs of dissipation. Potential peer competitor powers such as China and India are modernizing and expanding their respective navies. The global economy, including the international exchange of ideas, is increasingly dependent on the seas as the world becomes more interdependent. In addition to the historical precedent suggesting that great powers require great naval forces, combining such a geopolitical reality with the strategic reality facing the U.S. military, namely reductions in the number and accessibility of forward operating bases, as Lieutenant General James F. Amos highlighted, the rationale behind the argument for a robust naval force in order to secure America's naval supremacy is sound.

Today, the U.S. Navy is approximately less than half of what it was during the Reagan administration. Several Panelists expressed concerns that the current fleet is inadequate to maintain U.S. naval supremacy in the decades ahead. While Seth Cropsey warned of the dangers surrounding an inadequate fleet size, Robert Work argued that the U.S. Navy is still capable of performing its vital function and if the Navy needs to increase its size to counter a threat, such as a belligerent China, it would be able to have the necessary time to do so. Robert Work added that in the face of an impending cataclysmic threat to maritime security, the democracies of the world, which also possess the best navies, will partner to confront the challenge cooperatively since each has a vested interest in maintaining security and keeping the sea lanes free and open.

Panelists agreed that China is a rising peer competitor power in the process of developing as a naval power in order to underwrite its strategic ambitions. Mr. Cropsey pointed out that the Chinese Navy is increasing the range and volume of port visits around the world. The Chinese Navy is trying to attain all weath-

er night capability and is extending the range of its ships. Mr. Cropsey, having acknowledged that a malignant rivalry with China is far from certain, urged the United States, not only the policymakers and military strategists, but also the public, to take China's rise and its implications seriously and to determine what the U.S. Navy will need to do in order to retain naval supremacy. Making contingency plans for wars with rival naval powers is natural, according to Mr. Work. He stated that the United States had contingency plans for potential armed conflict with the British Royal Navy until 1924. China is certainly developing capabilities meant to deter the U.S. and potentially to challenge American maritime forces if the need arises.

An issue of great interest and relevance with respect to the points discussed in this session was missile defense. Mr. Work stated that the Chinese military has increased its supply of ballistic missiles and enhanced its focus on nuclear submarines. Such an alignment underscores the notion that China is building up strategic options with which to deter the United States and to buttress its modernizing military. Vice Admiral J.D. Williams highlighted the Navy's critical role in ballistic missile defense, as well as touching upon current shortcomings, such as the Navy's inability to intercept short range missiles. If the United States fails to develop a robust ballistic missile defense to counter China's ballistic missile program, grave consequences will follow and may contribute to the decline of the United States as the world's greatest naval power.

Panelists discussed numerous challenges and dilemmas that arise when attempting to formulate the proper operational mix to complement the new Maritime Strategy. One issue addressed by the Panel was the balance between capital ships, the most important and heaviest, and smaller ships. The Panelists agreed that capital ships, albeit still important in the fleet, play a different role than they had in the Cold War when competition for blue water was fierce. The Navy needs to invest in a networked fleet involving a greater small boat fleet to account for the changing global realities without compromising capabilities provided by capital ships.

# *Dinner Keynote*

## **Admiral Patrick M. Walsh**

This is a great setting and I am very pleased to be here. Admirals, generals, distinguished guests, ladies and gentlemen, members of the international community, good evening. It is really good to be here this evening and to be among friends from the Institute for Foreign Policy Analysis, the Fletcher School of Law and Diplomacy, and the Naval War College.

This is a critical juncture in our nation and our Navy's history. I am humbled to stand before you tonight because I realize the talent that is in the room and a very knowledgeable audience.

I am also grateful for the intellectual wealth that is in the room and especially thankful for the program that so many of you have assembled. Your task was daunting, to explore, to discuss, and to

debate the core issues and themes that would reveal the relevant components that would help us start on a path to a new maritime strategy. We are indeed fortunate for the thorough, complete and coherent approach that you have undertaken. Rightfully, you began today's program with a clear and a focused eye on a very dynamic security setting. And the implications of its unpredictable nature, the changing role of state and non-state



actors, the impact of failed and failing states on the international systems, aspects of this changing landscape had the potential to pose a direct challenge to the economic, social, cultural, and political interdependence of the community of nations.

These factors are critical to strategy development for our service, because our service has a global view and one that must represent national interests on the international stage. Your participation today and tomorrow and the views that you have expressed on these subjects are very useful to us as we formulate the vision for the future and construct the program that resources, the ways and means to anticipate and respond to the world that you helped describe, the implications for force structure, modernization, interoperability, joint operations, and partnerships are substantial.

By design, we have reserved this capstone event for our most thoughtful and toughest audience as the maritime strategy development team makes this important stop on this way to publication. Discussions at this point and the sequence of the agenda provided here allow me to examine the operational art in today's maritime environment. My previous personal experience in Central Command influences me, and I suggest that it would serve as a useful case study and provide operational context to the broader discussion of maritime strategy development.

So allow me to step back in time for a period in which from October 2005 to March of 2007, I wore three hats in Bahrain. First, as the coalition force maritime component commander. Countries assigned were Australia, Belgium, Canada, France, Germany, Italy, Japan, The Netherlands, New Zealand, Pakistan, Portugal, Singapore, Spain, Turkey, the U.K., U.S., Bahrain, Saudi Arabia, 18 countries from many different parts of the world. This was a very impressive group of people to work with, in a headquarters integrated at the operations level, at the intelligence level, and in planning.

During the course of that time there, there were a number of events that played out over the 18 month period. Let me describe them to you. It is not a complete summation. When I arrived, we

were involved in earthquake relief for Pakistan. We had attacks by pirates on passenger ships in November of 2005, about 200 miles off the coast of Somalia. We had the worst maritime disaster in the recorded history of the Red Sea, with over 1,100 people who perished with a capsized ferry. There was an attack on Abqaiq, which is the Saudi oil refinery near Ras Tanura in the eastern provinces.

Prisoners escaped from Yemen who were part of al-Qaeda. These were the masterminds behind the attack on motor vessel Lindberg, as well as *U.S.S. Cole*. There was an explosion in the North Arabian Gulf in the spring of 2006 that disrupted oil flow out of Iraq. This was a maintenance error on Khawr Al Amaya Oil Terminal (KAAOT) that resulted in a very long and damaging oil slick, as well as loss of life. Fifteen thousand Americans evacuated from Lebanon. The conduct of that evacuation was done out of our headquarters. And then, with developments that would continue to take place in the course of 2006, we saw an increase and an up-tick in concerns about security for oil infrastructure in the Gulf and then there's the discussion about Iran. And so if you were to take a score sheet here and take a look at just the types of missions involved coming out of one headquarters, you will see humanitarian assistance, disaster relief, consequence management. You will see non-combat evacuation operations, and you will also see classic deterrence.

The other hat that I wore was as the naval component commander working for General Abizaid in Tampa, responsible for the operations and the planning for all maritime issues in the Central Command. And then finally, as the Fifth Fleet commander in the organize, train and equip function working for the Chief of Naval Operations, Admiral Mullen.

If you were going to look at a typical map of the world and see the area described in our unified command plan that we call Central Command, you would get an impression of the area from the cartographer's model. From the cartographer's model, the Central Command area of responsibility is relatively small, dwarfed by PACOM and EUCOM. It looks homogeneous and it looks like it

is predominantly land-centric in terms of the countries involved. But if you were to take that model and bring it into a little bit clearer focus and scale, what you would find is that there is actually quite a lot of water and quite a lot of diversity.

If you were to look at and think about the unified command plan as it was in the post-World War II era, where the world was divided up into 51 countries and compare it to where it is today with the 192 or so countries that compose the international system, it would give you some sense and appreciation for the amount of diversity and sophistication and complexity in the world that we operate in today.

As you look at Central Command itself proper, of the 27 countries that are part of it, 22 have equities on the water. Six thousand miles of coastline, and about 2 ½ million square miles of water that we would patrol. Unlike ground forces who take land, occupy it, put a fence around it and a flag on it, naval forces share the water. And for us, it begins at the Suez Canal through the Red Sea, to the Straits of Babel-Mandeb, through the Indian Ocean, into the Straits of Hormuz and up into the Gulf. Twenty-two countries have equities represented on the water. But more important than the physical description now is a better understanding of what influences are in play in the region. Supported by three continents, under the influence of Europe, Africa and Asia, all at once; 80 percent of the world's capacity for energy resources reside in the area. And it is the religious home to 1 ½ billion Muslims.

If you were to strip away the cartographer's model and look at the spiritual model, you would see something quite different. You would see Sunni, Shi'a, you would see a Jewish majority, you would see a Druze majority, you would see Coptic presence, Armenian orthodox, eastern orthodox, western Christian and Hindu, as well as others. Spiritual makeup does not limit itself to lines and boundaries. And typically, the American model here, the American melting pot, results in a model of diversity that is fantastically tolerant and flexible in its society because it has absorbed the whole world. In fact, within a 50 mile radius of



this city, I would suspect, you would find a fair representation of almost all, if not all, 192 countries in the system.

But that does not necessarily mean we have a clear understanding or comprehension of the world that we live in beyond our own borders. So our task as naval officers is to know the battle space, to know the enemy. Yet, we have a historical, as well as philosophical bias that precludes strategic clarity. The Enlightenment rejected divine influence in science. That results in a secular focus that forms the core intellectual foundation for most institutions of higher learning in the west. Therefore, we are not prepared to see spiritual aspects of problems or solutions. We do not see what happens when religious influences and modernity collide. We think history moves in a linear direction towards pluralism, meaning with greater education comes greater wealth, and with greater wealth comes a secular focus. Ironically globalization stimulated religious expansion. In many parts of the world, religion is the most compelling force that motivates and mobilizes people.

If you combine this notion with the recent release that many countries in the region have from imperialism, it paints another picture. I mean, let's look at just the experience that governments and national leaders in the region have had with self governance: Egypt, 1922; Sudan, 1956; Jordan, 1946; Israel, 1948; Lebanon, 1943; Iraq, 1932; Kuwait, 1961; Bahrain, Qatar, and UAE, 1971; Yemen, 1967; Pakistan, 1947; Syria, 1946; and Kazakhstan, Uzbekistan, and Turkistan, 1991. If you were to walk into a home in the region, what you would find more often than not is not a picture of the family reunion at the beach, you would find pictures of granddad on a camel in the desert. We are talking about a substantial percentage of the population that is merely two generations away from its Bedouin roots.

Think about where we were as a country in 1830 in terms of our understanding of what a representational form of government meant, who would vote, who would participate. And I think the conclusion that you will realize is that a part of the world that was the least prepared for change has been subjected to the



most change. Uncertain? You bet. Resistant to change? You bet. Because the pace, as well as the reach, is an assault on traditional religious and tribal values. The real threat in the region is more culture than it is military.

There are now security implications for this globalized world, implications that the character of the challenges we face is much more transnational and not limited to geographic boundaries or borders. If you were to look at the typical sorts of security concerns that we would consider in the region, meaning organized crime, drugs, illegal arms, smuggling, human trafficking, we now add to the list terrorism. Transshipment of weapons of mass destruction, and for the naval commander, the importance of understanding of how to recognize which of the many small vessels known as dhows that are so common to the seas in and around the Gulf may be carrying weapons of mass destruction.

So the challenge we have in a flat, interconnected, global society in a region where state, religion and ethnic politics are historically in tension, in an area where we have little understanding, is to know what we are witnessing. I would suggest that underneath the headline is a struggle of ideas between moderates who are tolerant, support modernity, pluralism, arbitration of disputes, versus those who reject the international order.

Therefore, movements along ideological lines and religious lines can spark quickly without limitation to coordinates or traditional lines of authority. I mentioned earlier the Red Sea disaster, the escape of prisoners from Yemen, as well as the attack on Abqaiq. What is interesting about these sorts of episodes in the context of my remarks is not that information came to us through national headquarters; we saw it all on CNN. So we are responding and using cable networks as a source of information here that we are going to react to. So what that means to us is that the order in the flow of information from local to regional to national and then over to another nation does not apply in this world. So that means that it is possible to start or to incite a global movement in real time. That can mean the incorrect reporting of the flushing of the Koran that can mean a cartoon that can mean an attack

on a holy site that means comments from a religious leader taken out of context. They have the potential now for immediate spill-over with regional and international implications.

Add to it now the war of ideologies, the view that Islam is under attack, where terrorists target defenseless victims as a way to cause terror in open societies. It is a war on society. It is an unholy war. It is destructive because this is against man and mankind. It is a murderous ideology that worships death more than life. They do not see the killing of innocents. What they see is the cleansing of the impure, where martyrdom is the goal for the member as well as for the family member. This group wants to leverage a frustrated population to target the overthrow of existing governments to establish an extremely repressive and violent social order. The acquisition of WMD is a religious duty. This is an enemy with no uniform, committed to his cause, and is murderous. And the result is that you have all the key ingredients for unrestricted and unlimited warfare.

So this has put tremendous pressure on leaders in the region. We have the rapid integration of world economies, the proliferation of technologies and the information explosion. Combine that now with birth rates that are very high, the creation of a youth bulge on top of sectarian history, culture and division that increases poverty, social gaps and cultural decline. And this is a region 30 years ago that was going to be the next wealthy part of the world.

So the challenge is to governance of the nation state, particularly in this part of the world and I would suggest others, has really put pressure on the role of government on when and where to use force and for us, the role and the use of the Navy. In my view, these add up to an understanding of military missions and issues that argue for seamless operations, agility, speed, precision, the sharing of information. It is a balance of capabilities that we are describing between regular warfare and major combat operations. And I would add another dimension or way of looking at this portfolio is kinetic as well as non-kinetic.

In the three hats that I wore, there were ways that we measured our own selves and our own performance. When I looked at the coalition, I looked at the ability of the coalition to endure for its stability, and the ability to achieve military missions. There were factors that affected their performance. Just the contribution that came from various navies, what those capabilities were resident inside those contributions. How closely we worked together, as well as the concept of operations that individual, all 18 members that I described, brought to the coalition. Recognizing differences in culture, but more to the point were rules of engagement, as well as authorities. Clearly, leadership had a role to play in the performance of the coalition.

In terms of measuring the U.S. Naval Forces Central Command (NAVCENT) part of my responsibilities, our measure of performance was the ability to detect, assess and anticipate trends, predictive analysis in planning for military operations. As far as the Fifth Fleet part of my work was concerned with the organizing, training, and equipping function – not only platforms, but also people. Trying to find not only the right number of people, but people with the right qualifications. So the challenge here for war fighting, for the war fighter, for readiness and for the future, has a lot to do with the world that you see. And that is what this presentation is all about, at least for this respective area of responsibilities.

Inside this battle space were three coalition task forces. At one point in time, in the North Arabian Gulf under the command of Australia, the Southern Gulf was under the command of Italy, and Task Force 150, which encompassed the Makran coast, down to the coast of Kenya and into the Red Sea, was under the command of Pakistan. The capabilities that typically navies from these various countries would share with us would involve not only destroyers and frigates, but also involve marine patrol aircraft, patrol boats, countermeasure ships, as well as submarines and logistics ships. A snapshot on a given day would be about 49 ships from 18 coalition partners.

If you were to look at that inventory that I just described, you could describe it as a third generation capability that must operate against a fourth generation adversary and environment. It is a fleet that was built some 20 years ago or more. So what has changed? Well, what is really changed is the thinking of the crew. The whole notion in a global war on terror, a find, fix, capture, kill, that is speed, precision, accuracy. The whole notion of deterrence is another aspect of this. And that comes back to the traditional notions of how we would organize and prepare ourselves for major combat operations.

But the trick, I think, to making a coalition work in this kind of environment is to try as best we can to synchronize effects and eliminate seams. So let me take you through one of the more notable examples. Motor vessel *Delta Ranger* was attacked about 210 miles off the coast of Somalia. The attack on motor vessel *Delta Ranger* fit a similar profile, which was guys in skiffs with rocket propelled grenades and AK47s opening up on a very large deck vessel. And fitting the profile here of typically snatching and grabbing the crew once they can grapple themselves aboard, and then take the ship inside Somali territorial waters and extract very large sums of money, eight, or nine hundred thousand dollars for each vessel is not uncommon.

And what we did not realize in the run-up to this, and it was only after the attack on *Seaborne Spirit* in November of 2005 that this sort of mode of operation and attack had been going on for quite some time. In fact, if you were to look at the satellite view of what commercial shipping lines were doing in response, they were moving further and further out to sea. So it was not unusual to look at a notice to seamen to move their shipping lines out to 250 to 300 miles off the coast of Somalia to give wide berth to the pirate activity that was ongoing.

This had gone unreported. It had gone unreported because the owners of the vessels were concerned about the rate that they would have to pay for insurance. And so as a result, it was not until the passenger attack that we realized the scope and the magnitude of the problem. When *Delta Ranger* was able to evade

attack successfully because of a sea condition and because of the speed of the vessel, they contacted the International Maritime Bureau in Kuala Lumpur who then contacted our headquarters. We then contacted the coalition commander who was Dutch at the time, who then took command of all aviation assets and provided a square search of the area looking for an unusual profile. And what they found was a dhow that was pulling three skiffs, which is very unusual 200 miles out at sea. We bird-dogged that suspected vessel all night long, and then closed in on the combatants so that at sunrise, without tipping our hand, we would be in a position to intercept the dhow and the three skiffs.

We launched the helicopter at sunrise, put smoke in the water in front of the path of the dhow, the dhow did not stop. We cleared the five-inch gun away from the dhow, and the dhow did not stop. We then swung the gun in front of the dhow and took warning shots in front of the dhow, the dhow stopped. We had a speaker who spoke Hindi as part of the crew of *U.S.S. Churchill* make contact and found out that there were 16 Indian crewmen held hostage by 10 Somali pirates. We were able to then make contact with the interagency back in the United States who negotiated with the government of Kenya, who were satisfied with the evidence, the witness statements, and that we were willing to bring all the parties into port in Kenya.

They took control, provided jurisdiction, held a trial and the pirates themselves were incarcerated for seven years, and they are now serving their sentences. So the idea of working across the seam here and working with agility and recognizing that there is an internationally accepted legal framework for this is powerful and very, very important. It attracts coalition partners who recognize that form of thinking and can justify their participation in a coalition setting.

So this is a blend now inside the coalition forces of capabilities here for both shallow water, as well as deep water. It is a blend of perspectives as well. Oftentimes, it was not unusual to get the question asked, well what kind of kinetic capability do these forces bring? They bring capability within their own con-

cept of operations, they are participating in a war that is much larger than simply the kinetic portfolio. So the path that we take here has a lot to do with what we see. That is why the strategy work that we have been undergoing here for some time is so very important.

There are many factors that you have helped us understand here that affect the security environment. Globalization is one aspect of it, the speed of information flow is another, the speed of movement and causes is another. That means that there is just no limit to the impact of raw information and how it is distributed. So we are embarked now on what will be, and has all the makings of a long war. And that term has come into play and come out of use, but it is going to take some time. Because winning requires moderates to overcome the forces of extremists. It means building rather than destroying. It means building institutions, armed forces, police, economic development, and good governance.

So why is it a long war? Well, there are many who blame the West for the loss of dignity and honor on a global scale. And that results in a struggle of ideas. It results in various external groups who use violence to achieve goals, increased capabilities and technology and communication that gives them greater ambition. I think there are three elements in winning the war. It means protecting and defending the homeland, it means being on offense with terrorism, and the capacity of terrorists to operate. It also means supporting mainstream Muslim efforts to reject violence and extremism. It is a blend of the kinetic as well as the non-kinetic.

There are critical enablers here that expand foreign partnerships and their capacity to prevent terrorist acquisition and use of WMD and that will institutionalize a strategy against extremism. This takes time. This is an enemy with global aspirations that will fight to the death. Winning requires moderates to win.

In sum, I think you could take a look at the missions now that will play out for the future for maritime forces and they will be both security as well as stability related. It is important to under-

stand what is behind these words because the factors that affect the security environment are additive and are all ingredients for unlimited, unrestricted warfare. So how do military organizations with a traditionally kinetic portfolio? Well, we need speed, we need precision, we need defense, and we need to be postured for sustained operations forward with a credible force required to generate the effect of freedom from danger and assured safety in the ungoverned anarchy of the sea.

But there is a related notion here as well, and that is stability. To have secure conditions that endure requires the ability to assess over time. We must be able to know what belongs and what does not belong at sea. We must know the hearts and minds before we can win them. And winning is key; otherwise, we are not part of the solution, we are part of the problem itself. And we will alienate locals and create insurgents faster than we can eliminate them.

Our own sometimes naïve enthusiasm and pressure to deliver results can inadvertently help the insurgency. So to win the long war, we must adopt an approach that will build trust. Pay-offs take time and patience, and what I have described to you is the other side of war, it is the human side of war. It is collective in character, shared in spirit and postured for the future.

So now we return to where we started, on the subject of the Maritime Strategy. And what I have described to you here is a supplement to the traditional approach that strategy plays for a service. I think of it traditionally as a vertical sort of document that starts out at the high level, works its way down through operations and tactics, influences acquisition. The difference in what we are talking about today is something that recognizes the traditional sort of role for the service, but also recognizes in order to have a future that has any kind of relevance to it, it has to work horizontally as well. And that is why one of the reasons why you will see when you look at the document, it will have the United States Marine Corps and the United States Coast Guard on it as well. The goal should be seamless operations from the shallow water to deep water.

We recognize that as far as the kinetic portfolio is concerned, we have to be able to work in the regular warfare all the way through major combat operations and the challenge will be an acquisition and procurement process that can keep pace with it. There is a non-kinetic dimension that builds partner capacity. It is the human dimension of security. Previously understated, underplayed, and not understood, but critical to the enduring success of security and stability. So today, we have the opportunity to find the words that can catch up with the action that is already in play. Thank you all for being here tonight; thank you for all that you have done for our United States Navy and our great country. Thank you.



*Day Two*  
*September 27, 2007*

## Session 5

# *Combatant Command Perspectives on the New Maritime Strategy*



## **Admiral Timothy J. Keating, USN**

The Pacific Command (PACOM) contains the largest Area of Responsibility (AOR) in the Department of Defense and most of the AOR consists of oceans. The Asia-Pacific area is vitally important to our nation and freer and more prosperous than ever due to a secure maritime domain. International prosperity depends upon continued security and stability.

- Each year nearly twenty million containers transit the oceans between Asia and the United States.
- Seventy thousand ships carrying a third of global trade by volume and more than a third of global oil trade pass through the Strait of Malacca every year.
- Seventy-five percent of China's oil is imported from the Middle East or Africa and transited over the sea. India imports sixty-five percent of its oil and if current projections hold, that percentage will increase to ninety percent in the years ahead.

The New Maritime Strategy accurately assesses today's reality with regard to the history, the current geo-political and eco-

conomic environments, and the trends that will most likely shape the future. Our maritime strategy, in order to be effective, must include four basic tenets.

- First, although traditional naval power remains critically important, especially in the Pacific, our new strategy must integrate and leverage our joint military capability. Real American sea power is, and must remain, fully linked to other services. Success in the maritime battle space is fundamentally found in joint military power: naval, air, and land power around the clock.
- Second, the new maritime strategy must emphasize and support continued U.S. military pre-eminence across the full spectrum of operations, whether by numbers, capabilities, or a combination of both. We must be able to overcome the challenges our nation will face in the Pacific, whether in combat operations, combating terrorism, countering weapons and technology proliferation, defending against ballistic missile attack, assisting neighbors in need and responding to distress after natural disasters.
- Third, even though we must always be prepared to act decisively and alone if necessary, we must work with allies and coalition partners. Threats to one nation's shipping, destruction of another's natural resources, proliferation of weapons of mass effect, or immense natural disaster, threaten the collective security and prosperity of all nations in our AOR. We must:
  - Encourage cooperation and collaboration among nations by increasing basic interoperability in the maritime domain.
  - Enhance strong bilateral relationships.
  - Strengthen multinational exchanges, exercises, and operations.
- Fourth, in order for the maritime strategy to be effective, a persistent,



visible maritime force posture must be present. We believe that a U.S. naval presence is important.

- Through naval presence, we communicate global reach and commitment to security and stability and are able to interact with partner nations and advance our interoperability goals.

For PACOM, the four tenets for a sound maritime strategy may be summarized as joint sea power, U.S. pre-eminence, collaboration and cooperation, and persistent real presence.

## **General Gene Renuart, USAF**

Creating maritime situational awareness, and the contributions to maritime warning, is a principal concern in my role as commander of Northern Command (NORTHCOM).

- Canada and the United States have tasked a bi-national command, North American Aerospace Defense Command, (NORAD), to conduct the mission of maritime warning.
- In the past we flew over the oceans and protected our nations, assuming the Navy paid close attention to what was happening below us. Today, this bi-national command will provide maritime warning of threats to the homeland.
- Charging NORAD with this mission enables us to exploit the advantage of capabilities that we have had in place for a number of years, namely effective relationships that we had established. Such cooperation allows both nations to focus on external threats, and the challenge to security that they may pose inside the country's borders.
- In order to know what to warn against, the challenge for us today at NORAD, as well as NORTHCOM as a whole,

remains to create an integrated picture of the maritime domain.

Since its beginning five years ago, NORTHCOM has made great strides in integrating the maritime component and focusing its mission.



- We are implementing the Secretary's Execution Order (EXORD).
- Our function in EXORD is to conduct homeland defense operations, including expanded Global Expanded Maritime Interception Operations (EMIO), thus allowing us to defeat those enemies that would challenge us through the air, land, or on or from the seas.
- We work hard to partner with Homeland Security, translating into close relationships with Border and Customs, the Coast Guard, and Alcohol, Tobacco, and Firearms (ATF).
- We also work closely with agencies from Canada and Mexico to help identify maritime threats so that those countries can make their own national decisions on how they want to deal with such threats.
- We want to make sure that we identify, collaborate on, intercept if necessary, and defend the nation from those who are out there every day trying to take advantage of the vulnerabilities in our society.

Cooperation and coordination are key enablers to implement the national strategy for maritime security.

- The combatant commands, particularly Southern Command (SOUTHCOM), PACOM, and European Command (EUCOM), intersect with NORTHCOM.
- In order to execute the national strategy for maritime security, which states that we must be prepared to stop terrorists, rogue states, and the like, before they can threaten or use weapons of mass destruction, or engage in attacks against the U.S. and our allies and friends, we must have a strong network, system, and structure.
- We must ensure that we have integrated sensors to allow each combatant commander to see the same picture in order to assess the threat and choose how to engage the threat.
- PACOM and NORTHCOM are becoming increasingly integrated with each other.
- We also need to provide the same transparent situational awareness to our coalition partners.

In addition to the statistics Admiral Keating provided, the numbers reflecting the homeland are illustrative of NORTHCOM's maritime responsibility.

- NORTHCOM's AOR consists of thirty-five million square miles of U.S. jurisdiction to monitor and protect in addition to twenty-five thousand miles of inland waterways.
- There are three hundred and sixty-one ports of entry including seventeen strategic ports. Between twelve hundred and fifteen hundred commercial vessels dock in our ports daily, amounting to an estimated 215 million container shipments annually.
- We transport over three billion tons of oil each year through our ports.
- We only receive customs declarations of vessels of more than three hundred gross tons, significantly limiting our visibility on smaller ships inbound to our coast, working within our coastal regions, and transiting our waterways.
- We have five times the number of people living on or near our coastlines as we do in the country's interior. And that number is expected to increase by about twenty-one million over the next decade.

Our national strategy for maritime security articulates four objectives to guide those dedicated to executing the strategy and focusing on the challenges of security in the maritime domain.

- To prevent terrorist attacks and criminal, hostile acts.
- To protect maritime-related population centers and critical infrastructures.
- To minimize damage and expedite recovery.
- To safeguard the ocean and its resources.

In order to accomplish the objectives presented above, NORTHCOM and NORAD must pursue several priorities, of which the construction of maritime domain awareness remains at the top of the list.

- We need to achieve full maritime domain awareness. We should not only network ships from many nations together, as Admiral Mullen briefed one year ago referring to the



Thousand Ship Navy, but also include aircraft and commercial shipping in broader international networks building on the Thousand Ship Navy concept. By doing so, we create a five hundred thousand sensor world that we must integrate and exploit to our advantage. Such a massive interface will help track the big targets as well as the small ones more effectively and efficiently.

- We must liaise more effectively with the Department of Homeland Security. All of the pictures need to be the same and then we must take advantage of this integration.
- We also sponsor joint technology capability demonstrators, which encourages the fusion of information in a manner that could be used by a federal agency, a coalition partner's agency, or our U.S. military. Two tools show incredible promise. The first is the comprehensive maritime awareness tool and the second outputs the same data but at a highly classified level.

We have to work as an inter-agency team to protect our homeland. I am not sure we have created the integration of all of the agencies in a way that we can see and plan for the future. We must be vigilant and pro-active. As history demonstrates with the Japanese sleeper cells mapping Pearl Harbor before December 7, 1941, and German agents bombing Black Tom Island in July of 1916, enemies will relentlessly seek to exploit our vulnerabilities. Al Qaeda is no different. We must not let our guard down or lose our focus.

## **General Norton A. Schwartz, USAF**

The United States Transportation Command relies heavily on the oceans to transport defense cargoes. Ninety per cent of the cargo is shipped by sea.



- Maritime strength and security is dependent on commercial capabilities that are U.S. flagged, maintained and operated.
- Seventy-nine percent of surface-shipped defense cargoes are transported by commercial capabilities.

The Transportation Command performs its duties through both commercial and organic capabilities. Commercial entities possess the ability to operate in a variety of environments, from the high seas to more remote locations, and maintain a wide network. Three elements of the relationship between the Transportation Command and the commercial world support the partnership: Voluntary Inter-modal Sealift Agreement; maritime security program; and cargo preference.

- These three programs through contractual arrangements permit us in times of crisis to have access to the necessary capacity.
- The Voluntary Inter-modal Sealift Agreement provides a multitude of ships.<sup>5</sup>
- The maritime security program makes available sixty specific ships.
- Offering peacetime cargo preference is critical in ensuring that the commercial component will work with us when needed in moments of crisis.<sup>6</sup>
- If we were to use government capacity to provide this capability, the endeavor would require a 50 billion dollar investment.
- It is also worth noting that an important characteristic of this relationship is that the ships used to perform these tasks are U.S. flagged and manned by the U.S. Merchant Marine. It is a tremendous asset to have Americans who

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5 According to the Department of Transportation, The Voluntary Inter-modal Sealift Agreement describes the arrangement as a “partnership between the U.S. Government and the maritime industry to provide the Department of Defense (DOD) with ‘assured access’ to commercial sealift and intermodal capacity to support the emergency deployment and sustenance of U.S. military forces.” The description can be accessed at: <http://www.marad.dot.gov/programs/MSP/visacover.html>.

6 An explanation of cargo preference is available at: <http://www.marad.dot.gov/offices/cargo/>.



are available to serve even in a commercial capacity when their country needs them.

If the maritime strategy does not sufficiently acknowledge the necessity to maintain this commercial-government relationship, and the access to the capacity which exists there, the country will be the poorer for it.

## Major General Glenn F. Spears, USAF

The United States Southern Command is responsible for military operations and promoting security cooperation covering a large and diverse region.

- The region covers 16 million square miles, approximately one-sixth of the world's surface. It includes 32 sovereign nations and 13 territories in Central America, South America, and the Caribbean.
- The region consists of diverse environments, from the Andes Mountains to the Choco Plains, from the Amazon to the island nations of the Caribbean. The two oceans that surround the land area are bridged by the strategically important Panama Canal.
- The half billion people who call the region home represent a variety of cultures, religions, languages, and ethnic heritages.
- The region also possesses political and economic diversity. Chile, for example, is a mature democracy and well developed economically. Haiti on the other hand, is a struggling democracy with a poor economy requiring nine thousand United Nations peace-keepers to provide security and stability.

The United States shares strong bonds with the region.

- The linkages are physical and geographic.
- There are historic roots between the United States and the region.



- The United States is tied to the region economically and its people share common values such as democracy and respect for human rights.
- We are fortunate that thirty-four of the thirty-five nations in the Western Hemisphere are democracies.
- There are no state-on-state armed conflicts and the probability of such conflicts surfacing in the future is low.

The Southern Command's strategic objectives include cooperative efforts to insure security, thus facilitating stability in the region and creating an environment conducive to prosperity.

- We must continue to initiate and sustain cooperative measures, which will serve as the foundation for successful and lasting partnerships.
- In order to achieve U.S. security objectives, we work with government, industry, academia, and with partner nations.

The region possesses many challenges requiring a sound maritime strategy.

- Some of the many challenges include narco-terrorism, crime and urban gangs, illicit trafficking, trans-national terrorism, the potential for future mass migrations, and natural disasters.
- All of these challenges to the region are transnational in nature. None can be solved unilaterally through traditional military missions. Each requires a cooperative regional response.

The many years of joint and combined exercises provide the foundation for maritime cooperative responses to these challenges. Even if we doubled the United States Navy and U.S. Coast Guard, we would not be capable of securing the region's maritime domain by ourselves.

- By promoting interoperability and the sharing of the most effective practices, joint exercises serve as mechanisms for developing cooperative linkages between us and the nations of the region and enabling us to build the command, control and communication framework needed for successful coalition operations. Unitas, which began in 1959 and is the

nation's longest-running security cooperation exercise, is one such example. Panamex, another joint exercise, brings together nineteen nations to enhance maritime domain awareness and to protect the Panama Canal.

- The benefits of conducting such joint exercises are evident. When Hurricane Felix, a category five hurricane, struck Central America as the last Panamax was nearing an end not too long ago, the *U.S.S. Wasp* and the *Samuel B. Roberts* sailed to the troubled areas and supported humanitarian relief efforts.
- Southern Command also supports the missions of the U.S. hospital ship *Comfort* and the high-speed vessel *Swift*. *Comfort*, with its one thousand beds and unique medical capabilities, alerts the peoples of the region to the fact that the United States cares for their well being. *Swift* is the pilot platform for the Navy's global fleet station initiative, aimed at strengthening U.S. global partnerships through training and security cooperation activities. *Swift*, a new and state-of-the-art wave-piercing catamaran, conducts security cooperation missions with partner nation militaries and security forces.

By implementing these activities, exercises, and operations, incorporating non-traditional stake-holders, public and private organizations, as well as using all elements of the United States government in the maritime and in other domains, we believe that we will successfully meet current and future challenges. For this purpose, Southern Command pursues the core objectives of its strategy, which are security, stability, and prosperity for our region. These objectives are consistent with the new Maritime Strategy.

## Analysis

Session Five examined the emerging priorities as viewed by the Combatant Commands (CoComs) and implications for maritime strategy. Panelists provided insights including: the need for joint interoperability; improved maritime domain awareness

integration; each Command's area of maritime responsibility; the importance of regional and inter-agency partnerships; present and future threats and future challenges facing the CoComs.

During the discussion, Admiral Timothy J. Keating, Commander, U.S. Pacific Command, made several key points. First, he addressed missile defense from the PACOM perspective. He conceded that NORTHCOM has a greater responsibility when it comes to defending the homeland from incoming missiles, but highlighted that PACOM is addressing the issue of release authority for missiles based in Alaska and California. Admiral Keating also noted that Japan is cooperating closely with the United States in ballistic missile defense. Japan is purchasing *Aegis* cruisers and seeking surface-to-air missile systems. Second, Admiral Keating described the transfer of wartime operational control of forces to South Korea in 2012 as a watershed planned change. Third, regarding a future conflict with China over Taiwan, the United States remains ready to act if necessary but is not presently anticipating any hostilities.

General Gene Renuart, Commander, U.S. Northern Command, explained NORAD's new role as the main authority for conducting the mission of maritime warning for the homeland. General Renuart addressed the need and urgency regarding the creation of an integrated picture of the maritime domain. All of the Commands and government agencies must integrate sensors in order to construct a strong network from which targets and threats to the homeland can be detected. In addition, cooperation with partner nations and inter-agency collaboration proves critical for accomplishing the mission. General Renuart addressed several important issues during the discussion session. Regarding missile defense and overlapping responsibilities between the theater and the homeland, General Renuart acknowledged PACOM's involvement in a theater response to a missile threat. However, if a missile threatens the United States, the threat falls under NORTHCOM's responsibility and is dealt with in a mid-course intercept process. Some participants expressed concern that the seams need to be closed between PACOM and NORTH-

COM in the delineation of intercept responsibilities for a missile launched against targets within the NORTHCOM AOR. General Renuart also addressed the issue of the ability of governors to access federal support and resources when needed. He highlighted Admiral Keating's past efforts as NORTHCOM commander in placing coordinating officers, post-brigade command colonels, in each of the Federal Emergency Management Agency (FEMA) regions charged with analyzing what resources are available to states to respond to emergencies and managing the cooperation between federal and state emergency responses.

During the discussion period, General Norton A. Schwartz, U.S. Transportation Command, noted that there is a risk of having too much sealift capability emanating from the government, which may occur if and when the workload subsides in the future, for example when the United States reduces military operations in Iraq. Too much sealift capability with little work may compete with the very commercial entities we want to sustain in peacetime in order to ensure viability and cooperation during wartime.

Major General Glenn F. Spears, Deputy Commander, U.S. Southern Command, highlighted the importance of the U.S. military in the counter-drug mission, which is a national threat. General Spears also highlighted the interest in the *Swift's* capabilities in the realm of security cooperation, building partnerships and disaster relief. He strongly urged its acquisition by the services.

The CoComs agreed that an improved level of integration between the Commands, as well as civilian authorities, is needed. This includes expanded and integrated sensors so that each CoCom will have greater domain awareness. Possessing the ability to view the same picture allows the CoComs and policymakers to jointly act more effectively. Improved sensor integration will allow the Commands to improve maritime domain awareness as well as enhance missile defense.

Integration was only part of a greater plea by the CoComs for increased attention to interoperability. What makes this mar-

itime strategy unique is its emphasis on the joint capabilities of the military and the need for greater collaboration. Indeed, interoperability and joint capabilities provided a recurring conference theme. The CoComs emphasized the importance of exploiting the joint capabilities and potentials the U.S. military has to offer and to make these capabilities broader and more effective.

Finally, the CoComs discussed the vital importance of building lasting working relationships with partner nations and commercial entities. The threats facing each respective theater and the vast territory encompassed by each Command requires the United States, although ready to use force if necessary, to encourage security and stability through cooperation. The United States must expand upon existing cooperative efforts. Furthermore, the United States should improve its relationship with commercial entities in order to not only support logistics and to enhance maritime domain awareness but also to provide ready access to surge capabilities that will be needed in crisis situations.

## Session 6

# *International Perspectives: Developing Global Maritime Partnerships*



## **Commodore Vincenzo E.B. Di Pietro**

The Royal Australian Navy (RAN) consists of 14,000 people in uniform and is supported by a robust civilian infrastructure charged with protecting 36,000 kilometers of coastline and 22 million people. The RAN recognizes the importance of building international partnerships in order to improve maritime security. The RAN conducts its international engagement at three levels: strategic, operational and tactical.

- Strategic level engagement involves dialogue and reciprocal visits between the respective Chiefs of Navy and formal Navy-to-Navy talks. We currently conduct Navy-to-Navy talks with the United States, the United Kingdom, New Zealand, Japan, Singapore, Indonesia, Malaysia, Korea, Thailand and India. These talks are held at the Deputy Chief of Navy (2 star) or Director-General (1 star) level.
- Two other avenues for partnership building occur on a scheduled basis. First, the International Seapower Symposium, held at Newport every two years, is arguably the world's major gathering of senior navy leaders, and second, the Western Pacific Naval Symposium (WPNS), a regional forum aimed to promote maritime understanding and naval cooperation in the Western Pacific region.

- WPNS members include: Australia, Brunei, Cambodia, China, Fiji, France, Indonesia, Japan, Korea, Malaysia, New Zealand, the Philippines, Papua New Guinea, Russia, Singapore, Thailand, Tonga, the United States and Vietnam. Observer countries include Bangladesh, Canada, Chile, Peru, Mexico and India.
- Through these efforts, we ultimately seek enhanced interoperability, regional capacity building, integration, continued engagement with allies and regional navies, continued dialogue and access to the region.

The RAN possesses many capabilities and engages in initiatives that support the new Maritime Strategy.

- The Pacific Patrol Boat program is an outstanding example of capacity building. Throughout the 1970s and 80s, coastal states, due to the development of the Law of the Sea Convention, greatly increased their area of maritime responsibility. In 1984, through a Defense Cooperation Program, Australia began to provide patrol boats with training and personnel to help other Asia-Pacific nations improve their maritime surveillance capabilities. The RAN continues to provide a Lieutenant Commander ranked Maritime Surveillance Advisor and 1-2 technical Senior Sailors to each country participating in the program.
- The International Ship and Port Facility Security Code applies to all vessels over 500 tons, and is a comprehensive set of measures to enhance the security of ships and port facilities.<sup>7</sup>
- The Proliferation Security Initiative (PSI) aims to impede illicit weapons of mass destruction (WMD) related trade to and from states of proliferation concern and terrorist groups. The program has grown rapidly since President Bush first launched it in May 2003. Australia has been a key participant from the beginning and has attended all PSI meetings. We hosted and chaired the second plenary

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<sup>7</sup> An outline of the International Ship and Port Facility Security Code provided by the Australian government is available at: <http://www.dotars.gov.au/transport/security/maritime/isps/index.aspx>.



meeting in Brisbane in July 2003 and hosted a meeting of legal and operational experts in Sydney in December 2004. Australia also led two successful PSI exercises – ‘Pacific Protector’ in the Coral Sea in September 2003, and ‘Pacific Protector 06’ in Darwin in April 2006.

The RAN fully agrees with Admiral Mullen’s call for a Global Maritime Partnership. The challenge remains how to make this concept operational.

- The Australian initiative, the establishment of the collaborative Defense-Customs Organization, the Border Protection Command, can serve, although some key differences exist, as a useful model for a more robust and complex global network.
- The pursuit of a maritime security network is particularly pertinent in the Southeast Asian region where every nation’s economic success is inextricably linked to the security of the Sea Lines of Communication in the region. This region is known for the abundance of maritime crime and it is believed that terrorists move around on these waters unimpeded. The concept is a method for bringing together many like-minded nations to achieve a common objective—the eventual security of the regional maritime environment.
- The opportunity to participate in regional exercises, either on a multilateral or bilateral basis with other navies, provides an opportunity to learn new skills, enhance existing skills, and understand how to conduct combined operations.
- Training exercises and exchanges remain critical, initially to improve individual skill sets, then collectively across a vessel and then between vessels.
- A fusing of intelligence and surveillance information and the proper transmission to those who need it in a timely fashion is essential in order to make the Global Maritime Partnership concept work.

## Walter F. Doran

The Pacific and Indian Ocean regions are vitally important areas and have shown signs of great promise in cooperative and multilateral efforts.

- The tsunami relief effort was a tremendous display of naval collaboration. From the Strait of Malacca to the Maldives, and up the eastern coast to India, there was an extraordinary maritime response to this catastrophe.
- Navies from around the world, including Singapore, India, Korea, Malaysia, the United Kingdom, France, Japan, the United States, and some others, participated in the relief effort.
- The relief effort possessed no formal command arrangement and was unprecedented as an example of a major unanticipated crisis to which many nations responded, each according to its capability. This could turn out to be a harbinger of what the new Maritime Strategy will envisage.
- Every conversation about Asia includes China even when it is not mentioned explicitly. China may have learned from its inability to respond effectively and in timely fashion to the tsunami disaster.

Although no formal multinational organization such as NATO exists in the Pacific and the Indian Ocean area, there are several ongoing cooperative efforts:

- The history of recent maritime operations in the Pacific and the Indian Ocean area primarily includes bilateral exercises with the United States Seventh fleet.
- The Western Pacific Naval Symposium which convenes

every other year is an important forum for discussion among naval services.

- The Shangri La dialogue is held every year in Singapore and is generally attended at the secretary of defense level.
- The relationship between the U.S. Seventh Fleet and the Japanese Maritime Self-Defense Force (JMSDF) is arguably



the most consistent relationship between maritime forces in the world. It is a relationship that has been, and will continue to be, crucially important to the United States presence in the Western Pacific.

- RIMPAC, an exercise held every other year off Hawaii, includes units from the Royal Navy, the Canadian Navy, the JMSDF, the Korean Navy, the Royal Australian Navy (RAN), the Peruvian and Chilean navies.
- Talisman Saber is an exercise between the U.S. and RAN.
- Cooperation and Readiness at Sea Training (CARAT) is a series of bilateral exercises conducted by the United States Navy with the navies of Southeast Asia.
- The Malabar exercises with the Indian Navy evolved and developed greatly in recent years. In addition, the Indian Navy deployed five ships over the summer of 2007 to work with the Russian Navy, and drilled with the U.S., Japan, and the Chinese navies. The ships also participated in the International Maritime Exposition hosted by the Singaporean Navy.

Interoperability remains an important and critical element in enabling cooperation and facilitating the new Maritime Strategy.

- The ability to cooperate is immeasurably aided by interoperable equipment and systems.
- We must overhaul our procedures to allow us to transfer appropriate technology in a timely manner to close allies and coalition partners.
- The transfer of the *I.N.S. Jalashva*, formerly the *U.S.S. Trenton*, is a good example of technology transfer and the enhancement of interoperability.

## Rear Admiral Carlton “Bud” Jewett

The increasingly interdependent world entwines nations. Economic prosperity is the common interest that motivates nations to improve stability and security in the maritime environment.

- Maritime security is the foundation both for regional stability and for continued prosperity based on the flow of trade.
- Such security requires free, open, and secure Sea Lines of Communication, an element all too often taken for granted by many people.
- No nation can provide maritime security alone. Not only does the United States lack means to ensure security of the maritime environments by itself, but it also has no interest or desire to go it alone.
- Partners and allies, along with their common interest in securing the maritime environment, bring unique perspectives and capabilities, as well as an in-depth knowledge of their respective regions, which is absolutely essential to building success.

Broad support and cooperation is the basis for the Global Maritime Partnership concept.

- The concept contributes to collective defense through cooperation.
- A network of international navies, coast guards, maritime forces, port operators, commercial shippers, and local law enforcement can, and do, work together towards a common goal.
- Participation is voluntary and nations participate up to their own desired levels. There is no central decision-making body, no obligation to act and yet the concept possesses an inherent deterrence value.
- Global Fleet Stations (GFS) are key elements in the Global Maritime Partnership concept. Presently at the Naval Warfare Development Command, we are writing a Contingency of Operations designed to illustrate how we will develop GFS.
- The U.S. Navy engages in several efforts to build partnerships and enduring relationships through goodwill. The *Mercy*, for example, provided a wide range of medical, dental,

and civic action to host nations' citizens in Bangladesh, East Timor, Indonesia and the Philippines.

Maritime Domain Awareness, as Admiral Roughead, newly appointed Chief of Naval Operations, has detailed, is where it all begins.

- We cannot conduct the operations that we must if we fail to have a good sense of conditions on, above, or under the seas.
- Maritime Domain Awareness is the key enabler that we need to ensure the freedom and navigation, flow of commerce, the knowledge of what is out there, and the ability to counter the threats that we might face.
- We must share information. We must develop means of making information more accessible from an internal policy standpoint as well as a technical and interoperability perspective.
- We need to develop common procedures and doctrines so that when we come together we can be effective in operating.
- Joint training is essential for success in this endeavor.

## **Commodore Parasurama Naidu Murugesan**

India, and its navy, is a pivotal piece in the global puzzle that is maritime security.

- India has a coastline greater than 7,500 kilometers, with 575 islands to the east at a distance of 750 nautical miles and thirty islands to the west at a distance of 150 nautical miles.
- India is fighting its own war against terrorism. In the past, the explosives used in several high profile terrorist attacks were initially transported via a sea route. The Indian Navy has patrolled the east coast between Sri Lanka and India for more than twenty years, conducting counterterrorist operations as well as monitoring illegal movement.

- India claims more than two million square kilometers of Exclusive Economic Zone (EEZ) containing vast amounts of resources.
- India maintains thirteen major ports and 185 minor ports and is expanding many of these minor ports into major ones by investing millions of dollars in development.
- India's trade is growing at a rate of 20 to 25 percent annually.
- Ninety-seven percent of Indian trade is transported by sea.
- Energy security is a critical component of India's national interest. The Indian Ocean is a major transit zone for oil shipments originating in the Persian Gulf. More than one hundred thousand ships transit the Indian Ocean each year, out of which seventy thousand ships pass through the Malacca Straits. Only 30 percent of India's requirement of oil is produced indigenously with 90 percent of that amount emanating from off-shore oil production. It is the Indian Navy's responsibility to make sure that this sea-based oil production proceeds without interruption across secure transit routes.

The Indian Navy is modernizing and developing into a robust naval force.

- The navy currently maintains a fleet of 140 ships.
- India's second aircraft carrier is presently being refitted and is expected to join the fleet by the end of next year. We have already commenced building our third indigenous carrier in Cochin and should be deployable within the next decade.
- Three more destroyers are being built along with three frigates. We are also building six Scorpion submarines in Mumbai. The navy is considering a variety of other warships as well.

India promotes global partnerships and encourages cooperation. A strong working relationship with the United States exists and is important to India.

- In the six months following the tragic events on September 11, 2001, India performed approximately twenty-four escort missions of high-value U.S. assets across the Malacca Strait.
- We cooperated with the United States in disaster relief efforts both in India and abroad following the devastating tsunami.
- We conduct joint training missions with the U.S. Navy and others as well.
- We also conduct a regional forum where representatives from regional navies meet in a conference setting and interact professionally and socially for the purposes of familiarizing themselves with counterparts and to coordinate joint activities and future channels of cooperation.

## **Rear Admiral (UH) Kadir Sağdıç**

With the onset of globalization and the rise of new threats that can exploit the maritime environment, maritime states are increasingly concerned with maritime security. The world is dependent upon the maritime domain for its economic growth and prosperity.

- Over two-thirds of the world's population lives within 100 miles of a coast.
- Over 150 of the 192 member states of the UN are coastal states.
- More than 30% of the world economy depends on international trade.
- Over 90% of international trade is conducted by over 50,000 ships servicing nearly 4,000 ports.
- Sea transportation accounts for 90% of Turkish exports and imports. A quarter of a billion tons of goods were handled in Turkish ports last year, twice as much as in 1997.

Turkey heavily relies on access to the sea and its ability to serve as a natural energy bridge between source-rich countries and the energy-hungry world markets due to Turkey's strategical-

ly important geographic position. Energy security has emerged as a critical issue and point of interest.

- Turkey's maritime environment is increasingly important because of sea based energy corridors crossing the Black, Aegean, and Mediterranean seas through the Turkish Straits in addition to the "Blue Stream" gas pipeline in the Black Sea and the Baku-Tbilisi-Ceyhan pipeline, Kirkük-Yumurtalik and the future Samsun-Ceyhan pipelines.
- Over the course of the last decade, Caspian Sea and Central Asian hydrocarbon resources have opened up to global markets. The Black Sea is one of the world's most critical energy corridors.
- On average, 300 ships travel in the Black Sea daily. Last year, 55,000 merchant ships belonging to 102 states navigated through the Turkish Straits. The ships transported nearly half a billion tons of goods, one third of which constituted petroleum products.

Due to the increased economic importance of Turkish waters within the new global security environment, the Turkish Navy and Coast Guard evolved into a dynamic force capable of handling both conventional and unconventional tasks as well as constabulary missions. The Turkish approach to Black Sea maritime security is based on two pillars:

- First, full cooperation and coordination among all Black Sea littoral states should be attained, so that regional stability could be further enhanced.
- Second, the maritime security of the region should be complementary, not a competing one, to the Euro-Atlantic security system, as maritime security is indivisible.

Turkey has initiated several programs to increase maritime security in the Black Sea region.

- Blackseafort began in 2001 and was activated for the tenth time in August 2007 under Turkish command. Blackseafort is a multinational naval on-call task group aimed to increase cooperation and promote interoperability between various militaries and security agencies in the region.



- Operation Black Sea Harmony, conducted by the Turkish Navy and Coast Guard, with participation from several Black Sea countries and affiliated with the NATO-led Active Endeavour in the Mediterranean (intelligence sharing and suspect vessel shadowing and interdiction), seeks to deter, disrupt and prevent potential acts of terrorism, illicit trafficking and performing other patrol missions. According to statistics compiled for a period of three years, Operation Black Sea Harmony has detected 475,000 contacts and identified 98 percent of said contacts.
- Maritime situational awareness has dramatically improved as a result of an integrated network of coastal surveillance radar stations equipped with automated identification systems in the Black Sea, in addition to the Aegean and Mediterranean seas, under the Turkish Navy maritime surveillance system. The data gathered from the radar stations is disseminated to NATO.
- Operation Mediterranean Shield aims to provide deterrence and security for the oil transportation routes emanating from the Bay of Iskenderun as well as enhancing maritime domain awareness. The Bay of Iskenderun is the terminal for BTC and Kerkuk Yumurtalik pipelines, which when running at full capacity will pump 140 million tons of oil to global markets. The information collected through Operation Mediterranean Shield is shared with NATO, UNIFL, and other regional and national programs such as the Italian Navy's Virtual Regional Maritime Traffic Center.

Turkey has also participated in many cooperative ventures and nurtures partnerships for the purposes of enhancing maritime domain awareness and improving security.

- In addition to the collaborative measures previously mentioned, the Turkish Navy has participated in UNIFL operations in Lebanon.
- Turkey was an active member, alongside the U.S. and the E.U. during the 2005 negotiations for the amendment to the Con-

vention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation signed in Rome in 1988.

- Turkey's current maritime strategy places great emphasis on the human dimension and public relations. Port visits are key mechanisms for executing the tenets of this strategy.

Our maritime strategy hopes to maintain and sustain regional stability through positive relationships, to fulfill Allied commitments, to be prepared to meet the security challenges of today and tomorrow, and to enhance internal interoperability.

## Rear Admiral Philip Wilcocks

Contrary to popular media speculation, the Royal Navy is in fact a viable naval force and is continuing to expand its capabilities.

- The Royal Navy is going through the largest ship-building program by tonnage since the Second World War.
- We have revamped our amphibious forces. Our Royal Marines now have protected mobility on the battlefield.
- The Merlin Maritime Patrol Helicopter is in service along with the *H.M.S. Astute* submarine.
- The destroyer *H.M.S. Daring* is presently at sea trials.
- The British government has plans to build two 65,000-ton aircraft carriers, the first of which will enter service in 2012 and the second in 2016.
- We have plans to enhance our support capabilities over the next decade.

The Royal Navy's intent is to provide maritime security for those acting in a lawful manner. The maritime environment is critical to the economic success and the survival of the majority of nations. The United Kingdom is no exception since it relies heavily on the seas for its economic growth and prosperity.

- Ninety-Five percent of the United Kingdom's imports and exports travel by sea.
- The maritime industry contributes 75 billion dollars directly each year to the national economy.

The maritime environment is rapidly changing and new realities are emerging.

- Coastal states are beginning to expand their infrastructures and becoming greater players in the maritime domain.
- The seas in some areas are more accessible due to climate change.
- Globalization is increasing the demand for resources. Resources in and under the sea are increasingly exploitable and will cause the patterns of resource dependency and the economics of supply and demand to change. Such changes increase strategic dependence upon sea routes. Such elevated activity has the potential to create conflict zones.
- These changes need to be matched by rapid changes in the framework that governs the lawful use of the sea, in providing the ability of the international community to provide security for those who wish to use the seas for legitimate trade. A better approach that deals with the threats of yesterday, such as human trafficking, and the threats of today, such as international terrorism, at the source needs to be addressed and should emphasize conflict prevention in support of diplomatic efforts. Within this framework, we must provide greater constraints on those who wish to use the oceans of the world for illegal purposes.
- The Royal Navy already actively engages both at a national and international level. The Royal Navy operates jointly with the United States Navy, NATO, and other governments in order to provide maritime security and stability. Over the past four years, we have prevented in excess of three billion dollars worth of drugs reaching the streets of Europe and the United States. The Royal Navy also participates with the U.S. Navy in Combined Task Force 150 around the Horn of Africa. The Royal Navy is engaged in collective defense in the Mediterranean Sea as part of NATO and other operations.

Although we will continue to be closely engaged as an ally of the United States, it is the wider cooperation of nations and their navies that offers the best hope of sustained security on the high

seas, which are, and will continue to be, the arterial routes that supply the economic life-blood of the world.

- We must continue to press for regional dialogues and coordination. We are still a long way from achieving a global coordinated network.
- We must develop the capability to deliver coordinated global action, including the use of effective coordinated intelligence.
- Such collaboration not only includes other countries, but also different agencies within one's own government. We must use all the sinews of our collective actions within and across government.
- Our enemies, both terrorists and criminals, will increasingly exploit the high seas. As part of a wider, comprehensive approach, our navies have the ability to counter these threats, as part of a joint force, but only if they work in partnership right from the outset.

## **Rear Admiral Masanori Yoshida**

The Japan Maritime Self Defense Force (JMSDF) has historically responded to security challenges and developed over the years into an emerging modernized naval force.

- The National Defense Council and the cabinet adopted the National Defense Program in October 1976, stating that Japan during peacetime needed and was well within its right to maintain a defense capability. The capability would be minimal, as much as was needed to defend a sovereign country.<sup>8</sup>
- The JMSDF built up its capabilities and defended the Japanese homeland from the Soviet Navy in the Greater Pacific during the Cold War.
- The National Defense Program was reassessed and reformulated in 1995 in order to account for the new realities resulting from the end of the Cold War.

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<sup>8</sup> A copy of the document is available at <http://www.ioc.u-tokyo.ac.jp/~worldjpn/documents/texts/docs/19761029.O1E.html>.

- The new National Defense Guideline was conceived in 2004 and aimed to establish a new vision for the JMSDF to respond to new threats and a wide spectrum of possible scenarios.
- Japan seeks actively to participate in international peace cooperation activities, defend against ballistic missile attack, aid in disaster relief, and improve the overall security environment.
- To be commissioned in 2009, the new Destroyer Helicopter (DDH) will enable Japan to execute its maritime security priorities and international commitments.<sup>9</sup>



Maintaining and developing partnerships remains essential for keeping maritime stability and security. Japan highly values and continues to strengthen its relationship with the United States.

- Ballistic Missile Defense is a key point of cooperation between the two countries.
- The JMSDF jointly trains with the U.S. Navy in order to improve interoperability and for deterrence purposes.
- The JMSDF participates in Navy-to-Navy defense exchange programs.

## Analysis

Session Six examined the dimensions of maritime strategy and the role of U.S. allies and coalition partners. Panelists discussed: leveraging allied-partner capabilities; intelligence sharing and greater maritime domain awareness; missile defense cooperation; and support for multinational humanitarian/disaster relief operations.

There was overall agreement that the development and nurturing of regional and global partnerships is essential for implementing the new Maritime Strategy and to promote secu-

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<sup>9</sup> A description and pictures of Japan's new DHH are available at: <http://www.globalsecurity.org/military/world/japan/ddh-x.htm>.

rity and stability in the maritime environment. With the rise of globalization and the tremendous importance the maritime environment holds for international economic prosperity, maritime cooperation between nations is of rising importance. This is reflected in the Global Maritime Partnership concept that was set forth by Admiral Michael Mullen when he was Chief of Naval Operations. This concept was discussed by several speakers, who alluded to the need for greater interoperability, specialization of roles and missions, and networks providing greater communications among nations who become part of such an international collaborative arrangement. It was pointed out that even the U.S. Navy with its many and diverse capabilities must increasingly work alongside other navies. The U.S. Navy is decreasing in size as the global economy and security grow more interdependent and as a result, its reliance on foreign navies and cooperative efforts with partner nations to secure the maritime environment and national interests will only increase. As Rear Admiral Sağdıç stated, maritime security is indivisible due to the interdependence of security. Commodore Murugesan, for example, reminded us that the Indian Ocean is inextricably linked to the Middle East, Southeast Asia, the United States and Europe because of its growing importance in the transport of energy, raw materials, and manufactured products. This growth is likely to accelerate in the years ahead as the economies of states such as India and China expand. Cooperation, interoperability, and joint exercises facilitate lasting partnerships. Panelists concurred that intelligence sharing is required and needs improvement. Furthermore, nations must develop means of transferring technology to increase interoperability without compromising sensitive materials and information.

The maritime environment is a key piece in the complex puzzle that is the international economy. In order to sustain current economic growth and to protect national interests, the maritime environment must be secured and stability achieved. Traditional maritime threats, such as illicit trafficking and piracy, still pose formidable threats to industry and national security, whereas

international terrorism, which increasingly uses the maritime environment, raises serious concerns as well, that are reflected in the Proliferation Security Initiative. These threats must be contained and, if possible, neutralized in order to preserve the freedom, openness and security of the Sea Lines of Communication. The panelists agreed that energy security and reliance on the sea will only increase in importance as offshore resources become more accessible and the demand for energy increases. As the new Maritime Strategy illustrates, the seas remain a critical avenue for energy trade. For example, energy accounts for two-thirds of international trade by sea. For this reason, among many others, the seas will remain vital to continued economic growth and prosperity in the 21<sup>st</sup> century global economy.

# *Luncheon Address*

## **Admiral Thad W. Allen**

I wish to discuss Arctic policy from the Coast Guard perspective, particularly in light of the implications of climate change and the reduction of sea ice in the Arctic. The Coast Guard's link to the Arctic and Alaska reaches deep into the historical annals of the Coast Guard.

- Immediately following the United States acquisition of Alaska in 1867, the Coast Guard dispatched a lighthouse service tender to Alaska to aid navigation which was vital to shipping.
- In 1875, the Treasury Department, of which the Coast Guard was then a part, sent a representative to evaluate the Pribilof Islands and the vastly exploited seal rookeries. This action led to the first field treaty of 1911 which provided the groundwork for the Marine Mammal Protection Act in the United States.
- Perhaps the most famous connection the Coast Guard shares with Alaska remains the deployment of the Coast Guard cutter *Bear* in the 1880s. The ship transferred pris-



oners, served as a courtroom, provided medical services, carried mail and enforced the law. The ship was a floating federal presence in Alaska. The commanding officer, Rory Mike Healy, introduced reindeer from Siberia in hopes of relieving Eskimos who were facing starvation and famine from year to year. When 235 people were stranded aboard eight whalers off Alaska's northern coast in 1897, 450 reindeer helped a team of three Coast Guard officers including Mike Bertholf who would become the first commandant of the modern Coast Guard in 1915, Eskimos and dog sleds cross 1600 miles in 3 ½ months to rescue the stranded sailors.

The time has arrived to hold a serious discussion about the national security implications of climate change, increased shipping, the increased use of Arctic waters for ecotourism, the increased use of the Arctic for oil and natural gas development and exploration, and the potential increase in usage due to a warm water path over the top of Russia or through the Northwest Passage, which saves four to five thousand miles from a Panama Canal or Suez Canal transit.

- In the 1980s, a cruise ship caught fire in the Gulf of Alaska. The Coast Guard successfully evacuated 500 people because we had access to helicopters near the incident. Forward presence or a forward operating base is critical and at times can mean the difference between life and death.
- This past April, off Newfoundland, 400 people were trapped in sea ice that broke free and was drifting. The Coast Guard provided Canada with ice breakers and assistance.
- Two years ago the *Celandine III* was transiting through the Unimak Pass in the Aleutians. The ship lost the ability to maneuver and ran aground, breaking in half,



depositing 300,000 gallons of oil in one of the most sensitive ecological bird nesting areas in Alaska. We mounted an environmental response in an area that was virtually inaccessible.

- 90 miles north of the Arctic Circle there is a small town, Kivalina. The town has no road access. In 2006 the citizens built a sea wall to protect the small village because the ice was no longer there to protect the town from storms. The replacement sea wall, which cost millions of dollars to build, was destroyed by the first storm that passed through. They lost 100 feet of island and after losing an additional 35 feet this year, they came within 35 feet of breaching the oil tanks that are located on the island.

As we look at the new Maritime Strategy globally, we cannot ignore the future of the Arctic and the implications of access to the Arctic with respect to national security, environmental and energy issues.

- We need to get the policy right. We must establish the requirements and decide on the desired foreign presence, either through continual presence in the water or through forward operating bases from which you can stage a response in the Arctic.
- In addition to domestic governance, such as the administration and Congress, we need to think about the roles and missions of the agencies that are involved in the Arctic, such as the Environmental Protection Agency (EPA), the National Oceanic and Atmospheric Association (NOAA), the Coast Guard, and the National Science Foundation. We also need to consider international governing bodies such as the Arctic Council.
- Unlike Antarctica, treaties do not presently govern the Arctic. I am not advocating for a treaty, simply we need to contemplate governance models as well as improved international cooperation.
- The United States must ratify the Law of the Sea Treaty. Under the Law of the Sea Treaty, countries can claim continental shelf areas, through an agreed upon process, beyond

the 200 mile exclusive economic zone. The U.S. government has equities in the Arctic as well off the north slope of Alaska. We must become an international player.

- We need to continue our dialogue with our Russian counterparts. With increased traffic, the Bering Strait will become an international choke point and we need to think about the safety, security, and environmental impacts associated with increased traffic through the Strait. We will need to consider whether or not the Bering Strait needs a traffic separation scheme.
- We should continue to foster our already strong relationship with Canada and the United Kingdom. We implemented a three part search and rescue agreement that we operate under. We also share a very robust agreement with Canada concerning oil spills.

Now is the time to seize on the initiative to have a discussion. Now is the time to look for international coordinating mechanisms and establish governance models that can help us develop the Arctic in terms of policy, presence and national interests in a way that benefits us in a world that we all share together.

## Analysis

The Arctic, as with so many other areas of the maritime domain, presents great opportunities as well as formidable challenges. The United States Coast Guard stands at the forefront of U.S. actions in the Arctic and possesses an intimate knowledge of the region. The Coast Guard uses the many tools in its arsenal, from a premier search and rescue capability to the famous ice breakers, not only as mechanisms to accomplish its mission, but also as a means of facilitating diplomatic relations and furthering regional cooperation. The Arctic region is experiencing numerous changes, from climate change to increased access, that directly impact U.S. interests and maritime security. In order to remain relevant in this dynamic environment, the United States must formulate a coherent policy for its actions and vision for the region as well as actively engage regional partners.

During the discussion period, Admiral Allen highlighted a central theme with many of the conference presenters and that is the importance of building international partnerships. He stressed the importance of U.S. involvement in ongoing domestic and international discussion about future Arctic policy. The Coast Guard is already involved in numerous international exchanges and envisions the expansion of such relationships in the near future. The Coast Guard is currently a member of the North Pacific Coast Guard Forum, which includes participants from Canada, Russia, South Korea, Japan and China. The Coast Guard will soon attend the first ever North Atlantic Coast Guard Forum hosted by Sweden. Admiral Allen hopes that in five to ten years, a world congress of Coast Guard forums will be established.

Admiral Allen placed great weight on the Coast Guard's relationship with China, which thus far proves crucial and beneficial with signs of great promise for the future. Admiral Allen described the Coast Guard's work with the Chinese government as a "very, very significant bilateral relationship." A Coast Guard Captain is stationed in Beijing serving as a liaison officer. The Coast Guard has visited China to inspect the international ship and port security safety codes and has invited China to do the same. Coast Guard cutters make port calls in China routinely and have done so for several years. Admiral Allen summarized the relationship with China as a "very strong, very robust, a very amiable relationship."

Admiral Allen also called for the creation and support of a governance structure "for what is arguably the last global commons." This structure requires three pillars in order for Arctic policy to remain relevant and account for the realities of tomorrow. First, one needs to understand the legal institutions, domestic legislation and international treaties that exist presently and try to build on them. Second, maritime domain awareness needs to improve in such a difficult environment for the purposes of identifying possible threats in timely fashion. Third, the U.S. must maintain the operational capability to act against threats in the Arctic maritime area.

## Session 7

# *Developing, Building, and Maintaining the Requisite Naval/Maritime Force Structure*



## Mr. Thomas L. MacKenzie

The new Maritime Strategy reflects the threats and future missions that the Navy, Marine Corps, and Coast Guard must face in the 21<sup>st</sup> century.

- Our forces still execute traditional missions, such as contending with regional threats, deterring or, if necessary, defeating a major enemy.
- In addition to hostile states, the United States and its allies must contend with terrorists, weapons proliferators, cyber outlaws, and other enemies of open society.
- Aside from dealing with these threats, our maritime forces will also secure the global economic commons, maintain peace, and respond to humanitarian crisis.

The men and women responsible for executing this strategy need the very best capabilities, in terms of technology and equipment, in order to confront today's threats and tomorrow's challenges.

- An understanding existed during the Cold War that technological innovation would be a clear determinant of suc-



cess. Government and industry partnered around this fundamental tenet, which resulted in the blossoming of a culture of innovation.

- Economic investment and risk were required to achieve success in the Cold War, but we can all agree that it was worth the effort.
- Following the Cold War, the government-industry partnership evolved in light of dramatically reduced budgets and the view that we were safe from the world around

us. As a result, the culture of innovation dissipated as the focus turned to cost and risk containment, which caused much human talent to turn away.

- In order to provide our services with what they require, we need to reinvest and refocus on technology innovation and place emphasis on the imperative of keeping our technological edge.

Our maritime forces certainly recognize that technological advantages are critical enablers for the future force-structure. The Navy's major investment in the development of distributive and netted operations is reflective of this understanding and is a cornerstone of the new Maritime Strategy.

- The Navy is investing heavily in a series of sensors, platforms, weapons, and networks. The acquisition and integration of these components allow skilled operators to interact with others over great distances on a variety of levels.
- The network information is incredibly rich because it is provided by multiple platforms on the network. It can be drawn on selectively by particular collaborating users, or groups of users, to fit their specific mission needs. This concept of operations affords the ability to cover vast expanses of sea and air space, counter widely dispersed terrorist organizations, and assist partner nations around the world.

- Only by embracing distributed and networked operations can we collaborate with others on the geospatial and temporal information that is essential to maritime domain awareness, and work with like-minded nations to secure the global commons and theater security cooperation.

Our technological advancement cannot remain static, focused only on the threats our forces face today. We must also focus on the future in order to make sure that our technological advantages anticipate future threats.

- China has been expanding its defense budget at double-digit rates for many years. This is expected to continue in the decade ahead.
- As advanced technology becomes more widely available, terrorists have more opportunities to build asymmetric war-fighting advantages.
- Sustaining technical superiority depends on innovation. We will need creative breakthroughs that enable us to more fully integrate functions within and between platforms, and that help us to improve the platforms, sensors, processors, weapons, and networks that put it all together.
- Supporting a culture of creativity and innovation means that the government- industry relationship must replace strategies based on risk aversion with a willingness to accept and manage risks. Developmental programs should be pursued in a work environment that motivates managers and engineers to find creative solutions. During the Cold War we made extraordinary advances in our military technologies, but we also had our share of failures. Yet we tolerated failures. Success requires an acceptance of failures along the way. Such an environment is the most likely to attract the top talent needed to build our future naval systems.
- The impetus to create new technologies will also prompt the development of new mission possibilities, bringing operational changes that can only be called revolutionary.



## Dr. Lawrence J. Cavaola

As the history of the Royal Navy demonstrates, a maritime strategy is important for military, economic and political purposes. A maritime strategy is needed not only to guide the military, but also to support the broader set of goals for our country. The maritime strategy has to inform and support funding appropriations decisions.

- When an infant United States Navy bought its first ships, six frigates, the service had to confront a variety of threats, from competitors with advanced capabilities to asymmetric warfare with the Barbary pirates. The Navy had to develop a ship-building program that could deal simultaneously with a spectrum of threats.
- Similarly, a balance needs to be established between innovation for the future and fleet demands for today.

In order for the Navy to be successful in the future, the Maritime Strategy needs to address three big issues: a balance between blue, green, and brown water; how the concept of sea-basing is put into practice; and missile defense.

- First, the Navy has to appropriate funds in a correctly balanced manner to meet all three of the Navy's domains, blue, green, and brown water. The Navy has a historic opportunity to assist our country in shaping the future, not only from a cooperative security standpoint but also fostering better governance and the rule of law.
- We have to account for the Navy's evolving responsibilities and there is also a need to define what these consist of. SOUTHCOM is engaging in a variety of non-military oriented missions, like that of the *USNS Comfort*, but how much of these types of operations will SOUTHCOM execute? AFRICOM is now in the equation, what will its balance of military and political-economic affairs look like?
- The Navy also has to be capable of dealing with peer competitor powers.
- These issues in the changing geopolitical world frame appropriations decisions. The new Maritime Strategy must inform



us as to the types and numbers of naval systems to be developed and deployed.

- Second, the concept of sea-basing raises many questions. Policy dilemmas need to be resolved, such as what type of forcible entry capability will we need to bring from the sea. Which services are going to participate and how much long-term, sustainable combat power will we need to bring from the sea. What is the balance between sea-basing, expeditionary strike groups and their dependence on carrier strike groups? Who is going to pay for the sea-basing program? Is it the Navy or a broader funding source? These are some of the questions and decisions that the Maritime Strategy should help us resolve.
- Third is missile defense. The Navy needs to decide its direction and pursue it vigorously. Missile defense, as a national-level program, is still fraught with much uncertainty, including the architectures, the roles of the combatant commanders, the funding sources, the service roles and missions, and politics. Resource implications are tremendous. Some of the technology, such as the Kinetic Energy Interceptor, is very expensive and requires new radars, ballistic missile command and control systems, and retraining of personnel. Here too, the Maritime Strategy needs to inform investment decisions.

## Mr. Bran Ferren

Maritime awareness will depend on sensors with a very high precision and reliable communications abilities.

- Our current plans to accomplish these mandates are poor and reflect Cold War thinking, and even during the Cold War there was misguided thinking.
- The present sensing and communicating path that we are following will not fulfill the expectations and needs for maritime awareness. It is too expensive, it will not work, and the problem is too great for the current plans.

Various constellations form a web of sensors that are not necessarily interacting with each other. For the Department of Defense, the term constellation refers to what is in orbit and constitutes the bedrock of how DOD thinks about future sensing and communication capabilities.

- There is a U.S. government constellation consisting of a classified constellation and one that is unclassified. There is a commercial constellation, which delivers satellite radio, MTV, and a variety of other things such as communication services. These three constellations are generally not interconnected with each other and the only coordination is that they do not destroy each other.
- Additional constellations exist. They include foreign military constellations as well as foreign civilian government classified constellations. There are literally hundreds of foreign constellations.
- There are three so-called nested shelves of constellations: space, where satellites orbit the earth; the air, where waves connecting wireless mobile devices send signals and AWACs, radar and planes circulate; and ground based sensors, such as webcams on street corners and copper and fiber networks. These three nested shelves are not a coordinated idea. Instead, they remain ported together through an interface standard and not through a unified vision.
- From the Navy's point-of-view, there should be an under-sea constellation with communication assets and relaying assets, as well as seismic and acoustic sensors.
- If each of these four constellation areas can be netted, working together in tandem, then we dramatically improve our sensing ability.

We spend a considerable amount of money on sensors. The sensors' worth should be measured by what percentage of time sensors deliver information of value.

- Military sensors take pictures of clouds most of the time. If we are lucky, military sensors never have to perform their stated functions other than for testing and evaluation.

- Now imagine what would happen if we took all of these sensors and constellations, netted them together, military and commercial, and actually created a fully coordinated constellation—a system of systems.
- A coordinated constellation would utilize sensors and fully exploit the potential afforded by sensors to improve domain awareness dramatically.
- This coordinated way of thought is actual sensor fusion with its low resolution assets reconfirming and increasing the readings of other assets. Such an outlook transforms the way in which we view sensors. No longer are sensors viewed strictly from the perspective of the individual sensor, or even a platform-centric view. Every new sensor would be viewed from a gap-filling viewpoint within the coordinated constellation.

A coordinated constellation would operate in the same manner as the Internet.

- Regulation would occur at the lowest level necessary for interoperability.
- The sensor would have a labeling block, similar to the Internet, identifying the user's objective, location and identity.
- The government initiates and enforces labeling through legislation. Afterwards, everyone in the private sector and defense community would be able to build the future systems capabilities that will be necessary if the new Maritime Strategy is to achieve its goals.

## Rear Admiral William Landay III

As a maritime nation, we tend to focus on three key elements that are crucially important to, but broader than, the new Maritime Strategy: the quality of our people and their ability to lead other people within the mission; the strength of the strategy, tactics and procedures; and the ability of technology to enable those first two elements. I will focus on the technology piece.

- The U.S. Marines are the most capable warriors that the world has ever seen. Two Marines possess the capability



to communicate from any two points on the earth and have access to a world-wide intelligence gathering network. They can also fix their position to a degree of accuracy that we have never seen before. These capabilities, including communication, access to actionable intelligence, and the ability to identify position of self and allies, enables our soldiers and sailors to shape the battlefield to an extent that is unprecedented.

- The adversary is also the most technologically sophisticated that we have ever

faced. The enemy can communicate from any two points on earth as well, and he also has access to a network of data collection that in turn produces actionable intelligence. He too can locate his position with a degree of accuracy that an enemy has never been able to claim before. The enemy also has access to the best technology that the global technology environment can provide.

The Maritime Strategy is about the global economy and partnering people together. The partnership building component brings both challenges and opportunities to the military and the nation.

- In order to take advantage of what the global economy can provide we must first, from a military perspective, decide how best to engage it so that we retain and advance our technical superiority.
- We are prepared to accept challenges. However, our restrictive mindset may prevent us from taking full advantage of emerging technologies that are being developed in many parts of the world. We benefit from technological opportunities while attempting to restrict others from obtaining the same benefits.
- Technology is a two-way path and we as a military need to think of how to take advantage of both paths.

The Office of Naval Research and the Department of Defense are actively engaged in the global exchange of ideas, research and technology products. Numerous partnerships exist with a variety of entities in order to create opportunities and support our efforts to remain at the forefront of technology.

- We actively support research engagements with a multitude of universities, non-profits, small and innovative companies, and large companies.
- A real challenge remains not only finding the right partnership and identifying the objective, but also to bring that innovative technology into our systems.
- Defense contractors possess a desire to develop and obtain this technology, but stipulations requiring the use of U.S. vendors, scientists, and students often prevent them from taking fullest advantage of international opportunities.
- When you think about maritime partnerships and what we seek to extract from them, it is not just about being able to figure out who is in the maritime environment. It really is about a partnership of how we are going to share ideas, innovation, and technologies, while retaining the critical aspects of national security.

We must improve our manner of engaging innovative companies and inventive people who are not defense contractors.

- The Office of Naval Research is bound by the same contracting and legal requirements to contract with a small, innovative company as we have with a large defense contractor. This process must be changed if we are to benefit fully from what dynamic, small companies may have to offer.
- We need to figure out how more easily to bring international technology into U.S. weapons systems.
- Including outside sources for technology acquisition is not the same as outsourcing our weapons systems and compromising national security through technology transfers. We need to figure out where good technology exists and how to acquire and incorporate it into our systems.

- We need to retain the best foreign students that our universities are educating in order to benefit from their innovative potential. By not doing so, we are missing a real opportunity to harness some of the best equipped and talented minds.

To summarize, if we do not figure out how to succeed in this global technology environment, we are going to lose out as a 21<sup>st</sup> century military power.

## Mr. John O'Neill

A new Maritime Strategy that contains diversity and flexibility requires us to change some of the processes relating to how industry and government work together. Otherwise, current trends in affordability suggest that the diversity needed for future maritime capabilities may be difficult to achieve.

- Diversity is a key component of the Maritime Strategy. We are trying to create influence in diverse areas than in the past with more diverse partners. Missions and response requirements are increasingly diverse.
- One implication of increased diversification is the need to remain flexible. The processes we undertake today must be done in a way that is readily adaptable to a broad range of circumstances and environments.

Keeping our forces in line with a strategy demanding flexibility as a consequence of an increasingly diverse environment creates affordability challenges.

- The cost of acquiring new ships, from submarines to carriers, is significantly greater than in the past.
- The end strength for our maritime forces shows signs of decreasing even though there is no corresponding decrease in cost.
- We need to separate the electronics life cycle from platform life cycles.
- We tend to apply a platform-centric model and fail to make common electronics across our warfare areas even though we are making progress in this regard.

- In addition to improved commonality, we must create a continuous insertion process that provides incentives to those who invent technology to have an economic return and to drive their technology to the application phase.
- The process would be improved if less change was made during the construction phase. The cost remains high to make changes to the project during construction. In the shipbuilding industry and government, we need to return to a mentality that demands to know what we want, how much it is going to cost and what the final product will look like.

Government and industry will have to change the manner in which they interact and produce in order for the new Maritime Strategy to remain affordable.

## Mr. Daniel L. Smith

The defense industry seeks both to maximize the shareholders' financial return and to provide our war fighters with the best equipment they can have. The Navy does not need us in industry to instruct them on their war-fighting strategy. The Navy does need us to tell them how they can achieve their war fighting goals in the best, most economical and affordable way. The new Maritime Strategy reflects the significant changes in the domestic and international environment and marketplace, changes that require us to make adjustments.

- Globalization has produced an interconnected world with an interconnected economy. Such a system shows signs of vulnerability to local disruptions occurring anywhere and anytime.
- No nation or service can do everything alone. There must be collaboration and strong partnerships. For the U.S. military, joint acquisition must support joint war fighting.



- The domestic and the international defense marketplace is much different than it has been. It is at least as challenging and changed as the geopolitical or geo-war fighting environment.
- We need to develop innovative industry partnerships on a global scale that account for these global changes.
- We also need to have a better industry system in terms of regulation and execution of technology transfer.

The Royal Australian Navy's Air Warfare Destroyer Program is a model for movement in the right direction.

- The Australian and U.S. governments were interested in equipping ships with *Aegis* capability, but also in meeting Australia's needs and requirements.
- Lockheed Martin is transferring *Aegis* systems to Australia and then Australia, Raytheon Australia, and ANC Shipbuilder, in an alliance contracting relationship, is taking the *Aegis* system and creating a war ship.
- Every party benefits in such a cooperative arrangement. Australia gets RAN application of *Aegis* technology and hundreds of domestic jobs. The U.S. reinforced a strong relationship with an ally and improved interoperability.

## Analysis

Session Seven examined the issue of developing, building, and maintaining the requisite naval/maritime force structure and also the state of the government-industry relationship. Panelists from the U.S. government and from the private sector addressed a range of subjects including: sustaining a robust U.S. Research and Development and defense industrial base; reconciling budget constraints with modernization needs; new approaches/concepts for ship building and aircraft design; developing critical skills for naval personnel to meet 21<sup>st</sup> century challenges; opportunities and potential vulnerabilities of buying off-shore; and promoting the vital security role of the private sector.

Admiral Landay described the Office of Naval Research, during the discussion period, as the "naval incubator of ideas."



The Office of Naval Research invests in basic research, cultivates ideas and further develops innovative concepts. The Office of Naval Research has begun to examine sensors and some of the issues that Bran Ferren raised during his presentation. The Office of Naval Research aligns the science and technology to the joint fight, the national security policy and the maritime strategy established by the Chief of Naval Operations and the other leadership of the maritime services. Admiral Landay also stated that the new Maritime Strategy will greatly influence the manner in which we approach science and technology.

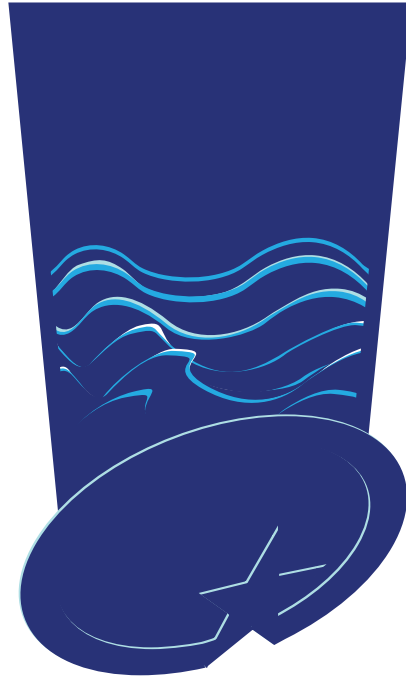
During the discussion, Daniel Smith described the differences between how government views investment and targeted research, in terms of technology development and acquisition, and how industry views the process. Unlike government, which invests in basic general research, industry develops a strategy and then targets investments for the purpose of executing the objective. Industry tries not to develop technologies only to think of ways to use that technology afterwards.

Bran Ferren during the discussion addressed questions concerned with security and his conceptualization of a future sensor system. From Mr. Ferren's perspective, security is not an issue and can be overcome by techniques used to secure previous systems. Enormous pressure persists to share information and systems and if correctly utilized, can produce tremendous amounts of information and improve efficiency. According to Mr. Ferren, you want to create an "open standard" of which the government has "ultimate control."

The Panelists agreed that relations between the government and industry need improvement. We need to quicken the procurement process. Processes should be streamlined and modernized to account for changing realities due to rapidly evolving security situations, military acquisition requirements and new outlooks with respect to maritime strategy, particularly concerning maritime domain awareness. This involves the ability to contract with small, innovative companies more easily than what current requirements allow. Furthermore, the government needs to

reevaluate restrictions regarding technology transfer and acquisition in order to enhance interoperability, expand partnerships and for human talent recruitment purposes, specifically attracting and securing young graduates from overseas. The panelists also discussed the need to strengthen partnerships domestically and globally between industry, government, and partner nations. Panelists from both the public and private sector strongly urged for an easing of restrictions in order to be able to draw more heavily on advantageous technology developed abroad. Finally, there is a growing disconnect between requirements and cost. Our fleet size and capabilities are shrinking while cost is rising. If such a trend continues, affordability of new systems and research and development will be in doubt.





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