

NATO, U.S. See Rise in Russian Naval Activity in Seas Around Europe, Top Commander Says



Air Force Gen. Tod Wolters, NATO's supreme allied commander and commander of U.S. European Command, speaks to a Defense Writers' breakfast Dec. 10. George Washington University
NATO and U.S. forces in Europe are seeing increased Russian naval activities in all the seas around Europe. But following a meeting with Russia's military chief they have seen no unprofessional or unsafe incidents at sea or in the air in at least 90 days, the top allied and U.S. commander in Europe said Dec. 10.

"I see Russian activity in the Arctic, see it in the Baltic, see it in the Black Sea, the Mediterranean," Air Force Gen. Tod Wolters, NATO's supreme allied commander and commander of U.S. European Command, told a Defense Writers' breakfast.

"I see Russia doing everything they can to expand their coverage, to see as much of the space as they possibly can, and it's something we will continue to dialogue about so that our sailors and their sailors are appropriately deconflicted, and we don't have any future incidents of unprofessional actions at sea and in the sky."

In recent years, allied commanders have complained repeatedly about dangerously close maneuvers by Russia aircraft near alliance

planes or ships and aggressive conduct, including near collisions, by Russian warships, particularly in the Black Sea.

“Since my last face-to-face with Gen. Gerasimov we have seen zero unprofessional incidents at sea, zero in the sky,” Wolters said, referring to Gen. Valery Gerasimov, Russia’s chief of staff, who he met in the fall.

Asked what the alliance is doing in response to the growing presence of Russian submarines, Wolters said, “we’re always looking at exercises and investments to improve our view of the maritime environment.

We’re heavily engaged in the Arctic, we’re heavily engaged in the central

Atlantic, in the western Med, the eastern Med. Every single day we’re looking

to see what we can possibly do to improve our ability to see the maritime

environment, to command and control the maritime and we do so comprehensively,

360 degrees, all around the European continent.”

Wolters said the Standing NATO Maritime Force is “focused on both” anti-submarine and counter-surface capabilities. NATO has two surface standing

groups and two mine countermeasure groups, made up of rotating ships from

alliance members.

Asked about his biggest technology needs, Wolters cited resources that allow commanders to act faster, that allow them “to see the

entire battlespace, so they could better defend” resources to command and

control. He noted NATO’s decision to buy Northrop Grumman’s

Global Hawk

long-endurance “remotely piloted aircraft,” as the Air Force calls UAVs, with five in the initial order.

Wolters spoke extensively about the upcoming Defender Europe 20 exercise, which will involve moving 20,000 U.S. troops from the United

States to join with more than 8,000 American and a similar number of allied

troops forces in Europe. It would be the largest movement of U.S. forces from

the states to Europe since the Cold War Reforger Exercises.

“It would be a huge benefit to show we can deploy from anywhere on earth” to deter a potential adversary, he said.

Asked about the

challenge of moving forces and supplies across the Atlantic in the face of the

growing Russian submarine threat, Wolters said: “I’m always concerned about

that. And the reason we’re doing Defender is to improve our ability to shift

and maneuver those forces over long distances. When we’re done, we’ll critique

it and get better in the future.”

**Navy, Marines Single
Integrated Naval Force Means**

Sweeping Changes

The two senior officers who are leading the drive to design the future naval forces said they are directing a closely integrated Navy and Marine Corps force structure assessment and plan to review the initial findings on a rolling basis in future years.

Vice Adm. James Kilby, Deputy Chief of Naval Operations for Warfighting Requirements and Capabilities, and Lt. Gen. Eric Smith, Deputy Marine Corps Commandant for Combat Development and Integration, said they have been directed by their service chiefs to scrape the traditional separated force structure design process and develop a single integrated naval force.

A key element in that cooperative effort is the sweeping changes in the numbers and type of ships in the amphibious forces proposed in Marine Corps Commandant Gen. David Berger's planning guidance. Ronald O'Rourke, the veteran naval forces analyst at Congressional Research Service, said, "If much of this is implemented, it would result in a once-in-a-generation change in Navy force structure." The scope of the potential changes also is shaped by Chief of Naval Operations Adm. Michael Gilday's revision of his predecessor's "Design for Maritime Superiority," which emphasizes offensive capabilities, extensively promotes unmanned systems and demands affordability.

Those three and Michael Petters, CEO at Huntington Ingalls Industries – the Navy's biggest shipbuilder – appeared in a panel at a Dec. 5

U.S. Naval Institute forum asking the question: "Are we building the naval power the nation needs?"

Kilby said the Navy's force structure assessments in the past "were done pretty much in isolation" by the Navy staff. But the CNO and Berger said,

"Turn that on its head," and he and Smith "are creating that integrated piece,"

which will be given to the systems requirements officials to flesh out. He said

the first iteration would be finished by the end of this month and they will

continue from there. The joint assessment team would remain and continue the

process in a "rolling assessment, an ongoing analysis."

Smith said, "We don't have all the answers, but what we know is we're a joint naval force. ... I'm in support of the fleet." That would mean as the Marines develop new longer-range

precision weapons, "I'm assuming my missiles should be able to shoot a ship,"

he said. Kilby said they had to learn from the joint assessments whether "this

force mix allow us to do things differently." For example, he said, "If what

the Marines do influences what happens at sea, I can change my plans."

Petters and O'Rourke said the drive for a significantly different force and the need to field new systems faster to keep pace with

their peer competitors' rapid development could change the way the Navy designs

and tests new ships, using more prototyping and accepting the risk of failure.

Undersecretary Affirms Need for Low-Yield Nuclear Weapons to Counter Russian, Chinese Arsenals



Undersecretary of Defense for Policy John Rood at a Defense Writers Group breakfast on Dec. 4. Defense Writers Group

A senior defense official reaffirmed the importance of the nuclear deterrent triad and the need for new sea-based, low-yield nuclear

weapons to counter increased nuclear arsenals by Russia and China and Russia's

professed doctrine of early use of low-yield weapons to prevent a U.S. nuclear response.

Undersecretary of Defense for Policy John Rood noted the findings by last year's Nuclear Posture Review (NPR) that "the United States

was reducing our reliance on nuclear weapons, reducing the size of our nuclear

stockpile, while at the same time Russia and China are moving in the opposition

direction, increasing their reliance on nuclear weapons ... and increasing the

numbers and types of nuclear weapons."

While the NPR endorsed the need to recapitalize the existing nuclear triad of land-based Minuteman III and submarine-launched Trident D-5 ballistic missiles and nuclear-capable U.S. Air Force bombers, it also "recommended pursue of some complementary capabilities," Rood told a Defense Writers' breakfast Dec. 4. President Trump then supported development of "a sea-launched cruise missile and a submarine-launched ballistic missile" with low-yield nuclear capability, he added.

"The ballistic missile is more advanced, utilizing the existing submarine-launched ballistic missile, the D-5, with a modified warhead for low yield. That program, we think, is going well. But for the [ship-launched] cruise missile, we are not as advanced," and were still going through an analysis of alternatives, Rood said.

Rood said the need for the new low-yield weapons came from intelligence reports of Russian emphasis on use of nuclear weapons earlier in a conflict, "and the mistaken belief that they have the ability to use a low-yield nuclear weapon earlier in the conflict in a way to deter response." He cited Russian President Vladimir Putin's public statements advocating the early use of low-yield nuclear weapons "as a way of deterring an adversary."

"We saw the need of aggressive action to restore deterrence, which had gotten weaker than we would like ... with these supplemental capabilities" that would show "we had a variety of

capabilities that were more survivable than the existing low-yield weapons" that are aircraft delivered.

"We see this as very stabilizing" and in no way supporting the concept of early use of low-yield nuclear weapons, Rood said, countering the warnings from arms-control advocates.

Rood also supported the administration's withdrawal from the Intermediate-Range Nuclear Missile Treaty because Russia fielded land-based missiles with a range beyond the INF limits, and the subsequent U.S. work to develop similar weapons. He said there has been some testing of a possible medium-range cruise missile but none for a ballistic missile. He avoided answering a question about whether any European ally has indicated willingness to host such a weapon by saying there had been no decision yet on developing any specific system.

And he restated the administration's adamant position that Turkey's possession of the Russian-built S-400 air- and missile-defense system "could never be compatible" with NATO, but added that Turkey remains an ally and member of the alliance. He did not answer a question of what Turkey could do to regain access to the F-35 program, for which it had been a component producer and intended buyer.

Alternative Ships for the Future Fight: Commandant, Others Call for More and Different Classes of Ships for 'Great Power' Showdown



The expeditionary fast transport (EPF) USNS Millinocket navigates in front of the littoral combat ship USS Montgomery for an exercise in October. EPFs, operated by Military Sealift Command and crewed by civilian mariners, are among the top candidates to help form a nontraditional fleet of supply and troop transport ships. U.S. Navy/Mass Communication Specialist 2nd Class Christopher A. Veloicaza

The growing military capabilities and escalating belligerence of China, Russia and Iran are increasing the possibility that the U.S. Navy's unarmed and thin-skinned support and supply ships – and even U.S. commercial cargo vessels – could face hostile action for the first time since World War II.

The potential that these ships and their crews of civilian mariners could be exposed to deadly weapons was strengthened when the Commandant of the U.S. Marine Corps said he might need these and other unconventional vessels to augment or replace traditional amphibious warships to transport and sustain his Marines during expeditionary operations in heavily contested littoral waters.

Check out the digital edition of December's *Seapower* magazine [here](#).

This emerging danger and the need for a broader concept of expeditionary vessels was bluntly stated by Gen. David H. Berger in his "Commandant's Planning Guidance," released July 17, in which he said:

"Our nation's ability to project power and influence beyond its shores is increasingly challenged by long-range precision fires; expanding air, surface and subsurface threats; and the continued degradation of our amphibious and auxiliary ship readiness. The ability to project and maneuver from strategic distances will likely be detected and contested from the point of embarkation during a major contingency. Our naval expeditionary forces must possess a variety of deployment options, including L-class and E-class ships, but also increasingly look to other available options such as unmanned platforms, stern landing vessels, other ocean-going connectors, and smaller more lethal and more risk-worthy platforms. We must continue to seek the affordable and plentiful at the expense of the exquisite and few when conceiving of the future amphibious portion of our fleet."

L-class ships are the traditional amphibious platforms, such as amphibious assault

ships (LHA) and amphibious transport docks (LPD), which are built to military standards and crewed by uniformed Sailors. E-class ships are newer types of auxiliary or support vessels, such as the expeditionary transport dock (ESD) ships and expeditionary fast transports (EPF), which are operated by the Military Sealift Command (MSC), are built to commercial classification and crewed mainly by civilian mariners.

Berger Suggests More 'Black-Bottom' Ships

In his guidance, Berger also suggests using "commercially available ships and craft that are smaller and less expensive" and "a wider array of smaller 'black-bottom' ships" that "might supplement the maritime preposition and amphibious fleets." Black-bottom ships usually refer to commercial vessels.

In March, Dakota Wood, a retired Marine officer and defense analyst at The Heritage Foundation, released the Marine Corps edition of the foundation's "Rebuilding America's Military" series. In that report, Wood said, "The supporting amphibious fleet is limited to a small number of ships and only a portion of those would be available for an operation in one part of the world." He recommended the naval services "redefine amphibious shipping and support capability requirements to account for combat operations in a contested littoral environment in support of a naval

campaign.” The Marines, Wood said, “must work with the Navy to develop smaller, lower cost ships that are better suited to the type of dispersed operational posture implied by LOCE [Littoral Operations in a Contested Environment],” which is a new Marine concept for expeditionary operations.



U.S. Marines assigned to a Fleet Anti-Terrorism Security Team approach the Arc Liberty, a Military Sealift Command chartered vessel, in the Persian Gulf to provide security during a Strait of Hormuz transit. It’s this type of mixture of U.S. and maritime forces that the commandant of the Marine Corps and others envision. U.S. Navy/Marine Corps Cpl. Tanner A. Gerst

Earlier this year, the Center of Strategic and Budgetary Assessments released a detailed report focused on the maritime logistic forces, calling them “inadequate to support” the national defense strategy and “major military operations against China or Russia.” Echoing Berger’s views, CSBA said the logistic fleet was too small and had the wrong types of ships to transport and sustain U.S. forces in waters defended by enemy missiles, submarines and aircraft. Failing to remedy those shortcomings, the report said, “could cause the United States to lose a war and fail its allies and partners in their hour of need.”

Fortunately, MSC and other defense organizations have recognized this growing danger and are taking steps to better prepare those ships and crews for

possibly going into harm's way. And the U.S. Navy and Marine Corps have joined in developing an Integrated Naval Force Structure Assessment for next year that could address Berger's need for a larger and more diverse expeditionary support fleet and the associated risk to the logistical and sealift ships if they have to operate in contested waters.

The threat to those support forces was recognized in 2017 by the MSC commander at the time, Rear Adm. Dee Mewbourne, who told *Seapower*, "The debate over whether we're in contested waters is over. We are sailing in contested waters," and the threat could get worse. With the "adversaries' rapid improvements" in military capabilities while his command has remained relatively static, "the capability of an adversary will exceed our capability. We need to bend the curve" and to change directions to be able "to operate in all the changing environments from peace to full combat."

"When our ships are sailing in a contested environment, the threats they could face are evolving all the time."

Navy Capt. Hans Lynch

Mewbourne said what worried him was the Navy's slow response to the German submarine threat during the World War II cost America at least 600

merchant ships and more than 1,000 mariners. And in the Pacific, the Navy had to fight for sea control to be able to support the campaign against Japan. Now he sees growing threats from China's rapidly improving military capabilities, a resurgent Russia and even from violent extremists in the Middle East, indicated by missile attacks on unarmed ships.

In response, Mewbourne said, MSC established a training division "to prepare our mariners to sail in contested water," to ensure they are aware that the decades of uncontested seas are gone, and they know how to avoid enemy detection and to survive if attacked. He is now deputy commander of the U.S. Transportation Command (TRANSCOM), which oversees MSC and the other logistical ships operated by the Maritime Administration (MARAD), led by retired Rear Adm. Mark Buzby, who strongly endorsed CSBA's findings.

TACAD

Trains Mariners to Operate in Contested Waters

In 2017, MSC also created the Tactical Advisor (TACAD) program, which uses Navy Reserve officers, who are licensed mariners in their civilian jobs, to provide training and guidance to the officers of MSC vessels on how to operate in a hostile environment. That new capability was tested during a short-notice "turbo

activation" of 33 MSC and MARAD ships in September, in which five sealift vessels conducted convoy operations against simulated enemy threats, with the support of TACAD officers.

"When our ships are sailing in a contested environment, the threats they could face are evolving all the time," said Navy Capt. Hans Lynch, MSC's Atlantic Commodore and who directed the East Coast activation. "The biggest threats we face include hostile submarines and mines, and these are the threats we were training for during the turbo activation." They trained the crews to "sail their ships as quietly as possible" to prevent detection of their electromagnetic signatures "because our ships also could face anti-ship ballistic missiles, cruise missiles, fighter aircraft and enemy bombers," Lynch said in a TRANSCOM release.

Each of those MSC ships sailed with a TACAD, who in addition to providing training served as liaison between the Navy and the civilian crews. "The TACAD program is a relatively new concept but is based on years of experience and past lessons learned," said Cmdr. Vincent D'Eusanio, the TACAD on one of the convoy ships and MSC's TACAD program manager. "During World War II, we lost lots of merchant ships and mariners. Some of this was a result of not

knowing how to sail a merchant ship in a hostile environment. When the Navy began to train mariners to counter threats, like the German U-boats, our losses dwindled.”

“We really need to continue to apply energy to the TACAD program,” Lynch said. “I think we need to expand what they are being exposed to” beyond the MSC sealift fleet “to other platforms and the combatant ships and aircraft to better understand what they bring to the table and broaden their experience.”

The Navy announced Oct. 31 that Marines and Sailors from the Fleet Anti-Terrorist Security Team Central Command embarked on the MSC chartered commercial vessel Arc Liberty from Oct. 21 to Oct. 24 during a transit of the Strait of Hormuz, where Iran has seized two commercial ships and shot down a Navy RQ-4 Triton unmanned aircraft.

Rear Adm. Michael A. Wettlaufer, the current MSC commander, said he did not think the threat to his ships was anything new. “It was always a possibility that our ships could go into harm’s way.” What may be new “is the expanded acknowledgement of ‘Great Power Competition’ – sort of noncombat at this time but potentially some level of conflict,” Wettlaufer said in an interview with *Seapower*.

“What are we doing? We’re training like crazy, because that’s what we do. We’re the military,” he said.

Because most of the military’s maritime logistics and support ships are leased or on contract with commercial firms or are in MARAD’s reserve fleet, and MSC does not get access to them until they are activated, Wettlaufer said, “We rely on some of that training to occur at the [mariners] union level.” MSC provides an unclassified basic operation course and has started an advanced course for senior mariners.

“At the MSC level, our own sealift folks have the same process. And, with the MSC force that is operating all the time ... in a continuing contested environment – physical, kinetic, information and cyber – our folks are training all the time,” he said.

Turbo Activation ‘Great for the Mariners’

Wettlaufer said the convoy operation during the turbo activation was “great for the mariners because they don’t often get a change to steam in formation. ... Those are skill sets that need to be mastered.” The TACADs assigned to those ships brought Navy communications equipment on board, which is necessary because “you

can't do anything if you can't communicate as the Navy and the joint force needs us to do."

For

the activation, the admiral said he deployed the MSC commodores for the Atlantic and Pacific, who are active Navy captains on his staff. And his flag aide at Norfolk headquarters is a strategic sealift officer (SSO), a licensed mariner who helps him understand how the commercial fleets work. MSC has more than 2,000 TACADs and SSOs it can deploy to advise and assist civilian mariners during missions. They are mainly Navy Reserve officers and in some cases are graduates of one of the federally supported maritime academies who have a reserve commitment, which they fulfill when activated as TACADs.

Wettlaufer noted that after the Cold War ended "the maritime academies stopped teaching some of the military things that we used to teach ... and that created a hole in knowledge. That's one of the reasons the TACAD program is there, to try to bridge that gap on what the Navy might need and how we operate between a master and the captain of a Navy ship.

"We are looking at a holistic approach to the problem. But the real point here is warfighting effectiveness. That is our job. We support the warfighter. We support the joint force, and if we can't do that, then we're not contributing to warfighting and effectiveness."

Key House Subcommittee Chairman Rejects Modernization Plans as 'Happy Talk'

Senior leaders from the four armed services said they have multibillion-dollar, long-term plans to modernize their aged maintenance facilities, but the chairman of a key House subcommittee rejected their "happy talk" and demanded evidence that the services are committed to funding the expensive programs to update their depots, shipyards and arsenals.

The need to modernize and improve badly outdated major maintenance facilities dominated the Nov. 21 hearing before the House Armed Services Committee's readiness subcommittee on the status of the Defense Department organic industrial base.

Subcommittee Chairman John Garamendi (D-Calif.) was joined by ranking member Doug Lamborn (R-Colo.) in demanding that the services commit to funding their plans to upgrade those facilities. The need for major improvements to the rework and repair facilities is elevated by the historically high average age of the services' legacy aircraft, ships, tanks and other weapon systems – many of which have obsolete parts that are no longer being produced.

"This situation does not help maintainers if they are required to work in dilapidated buildings with equipment made decades ago."

John Garamendi (D-Calif.), chairman, House Armed Services readiness subcommittee

"It is widely known that the facilities and equipment in our organic industrial base [are] aging and, in certain locations, [are] in poor or failing condition," Garamendi said in opening the hearing.

"This situation does not help maintainers if they are required to work in dilapidated buildings with equipment made decades ago. We must have a plan to modernize the facilities [and] sustainment, restoration and modernization accounts that support" them. He urged the witnesses to explain their plans to modernize their infrastructure and capital equipment.

In his opening statement, Lamborn, citing a Government Accountability Office report rating the condition of most of the depots as "poor," said: "It is not enough for our depots to meet today's requirements. We must also posture them to remain relevant for future demand. This raises a major concern about the state of our aging infrastructure."

The leaders of the services' construction and repair organizations acknowledge the deteriorated condition of their facilities and said they are executing long-range plans to update them.

Navy Vice Adm. Thomas Moore, commander of Naval Sea Systems Command, cited NAVSEA's \$21 billion, 20-year program to

dramatically modernize public shipyards. Vice Adm. G. Dean Peters, commander of Naval Air Systems Command, mentioned a \$1.9 billion, multiyear plan to update his plants. And Maj. Gen. Joseph Shrader, chief of Marine Corps Logistics Command, said he was following a \$1.9 billion, 25-year updating plan. Lt. Gen. Duane Gamble, deputy Army chief of staff for logistics, and Lt. Gen. Donald Kirkland, commander of the Air Force Sustainment Center, cited similar multibillion-dollar extended plans to modernize their facilities.

Garamendi said the committee had seen their plans, which he denounced as “happy talk,” and demanded that the leaders state their commitment to fully fund those plans. For their part, the uniformed leaders said their services were committed to the modernization programs, but that withheld assurance, citing the need for Congress to fund their long-term plans.

‘Faster and Cheaper’: Two Navy Officials Share Vision of All-Digital Development, Testing and Acquisition of Weapons and Systems

Greater use of digital technology in developing, testing and acquiring new weapons and systems can produce the new capabilities the sea services need to match emerging peer competitors and do so “faster and cheaper,” two senior U.S. Navy officials said Nov. 20.

Digital modeling and simulation, virtual testing and combined

live tests at sea or in the field can more quickly evaluate the capabilities of proposed systems while gaining valuable feedback from the warfighters, said William Bray, deputy assistant Navy secretary for research, development, test and evaluation.

A “digital transformation” to substitute computers for stacks of paper documents could reduce the time needed to take a proposed new capability from conception to full operational capability by at least half, added Garry Newton, the civilian deputy commander at Naval Air System Command.

The two officials were among a host of program officials, engineers and other procurement experts who attended a conference on model-based systems engineering staged by the American Society of Naval Engineers and described the increasing use of digitized information and processes in weapons development and sustainment.

Bray said the new National Security Strategy made it clear that “we are facing peer competitors and we have to focus on technology ... and how to deliver that capability,” he said.

Part of the drive to field weapons “faster and cheaper” involves “digitizing all facets of the work” and developing a “digital blueprint” for proposed systems that can be shared among defense acquisition officials and industry, Bray said. Greater use of modeling and simulation and virtual testing, combined with live testing of prototypes, also “will drive down [the] cost” of new weapons, he said.

Newton showed a video contrasting engineers and acquisition officials struggling through huge stacks of paper documents to process a proposed system with a similar group using only computer-generated information. The old system takes 15 to 20

years to produce a new weapon system, while “our competitors are doing it in five,” he said. Doing more of the system engineering digitally could cut the developmental process by 50% and, possibly, by 75%, “if we go at it really hard,” Newton said.

He cited a recent program to update F/A-18 Super Hornets in which NAVAIR put the proposal to a contractor digitally, told the contractor what the Navy was willing to pay and signed the contract – all without using a single piece of paper.

Efforts to adapt digitally are “past the technology problems” but now must overcome the “cultural problems, helping our people use the new tools,” Newton said.

Pentagon Missile Defense Chief Cites Threats From Maneuverable Missiles, Hypersonic Weapons

ARLINGTON, Va. – With the emergence of peer military competitors, the missile threat is evolving toward the use of maneuverable ballistic and cruise missiles and hypersonic weapons – all of which “drives you into the world of high speed,” Vice Adm. Jon A. Hill, director of the Defense Department’s Missile Defense Agency (MDA), told a gathering of naval engineers on Nov. 20.

“Speed is a big deal. We are driven by the threat, and it is amazing what we’re up against. ... It is stunning. What also is stunning is how the threat is changing,” Hill added during the

American Society of Naval Engineers symposium here in Arlington.

Hill noted that, when he took over MDA, the agency was focused on ballistic missiles. But new threats are emerging from air-launched ballistic and cruise missiles that can maneuver in different phases of their flight and "are capable of higher and higher speeds," he said. "It's a different world, and the agency will have to adjust."

And regarding another emerging threat from hypersonic weapons, he added: "We're working very diligently to understand everything" needed to counter these weapons.

Although MDA is responsible for defending the nation from missile threats, Hill emphasized that "everything we're doing for the fleet today is incredibly important. ... Our mission is providing a defensive capability, taking care of our forward deployed forces, our friends and allies."

And, he added, "defense itself is deterrence ... as a cost-imposing measure on the adversary." He said adversaries are spending so much on developing cruise missiles "because we have incredible capability" against ballistic missiles. Hill emphasized that missile defense is a joint effort across multiple U.S. military branches, citing the extensive work to integrate U.S. Air Force land and space sensors and the Army's THAAD and Patriot missile defense programs with the Navy's Aegis-based

defenses.

Hill said his top priority is “sustainment, taking care of what we have now,” and maintaining readiness, which consumes 60% of MDA’s budget. The second priority is building missile defense capacity, citing the expansion of the ground-based interceptors in California and Alaska, new space-based and land-based sensors, including those in Japan and Korea, and future Flight III Arleigh Burke-class destroyers.

With the new missile threats, including hypersonics, Hill emphasized the need for designing and engineering space capabilities for missile defense. “There are things you can only see from space.”

Navy Undersecretary Modly Touts E4S Education Initiative During Forum

The Navy Department is aggressively pushing its new “Education for Seapower” initiative because it will need Sailors and Marines who will have the mental flexibility and critical thinking skills to compete and win in an era of “great power competition” and rapidly changing technology, naval leaders of the effort said Nov. 14.

Educating its leaders is more important now because of “the new strategic environment we’re in” and the

rapid changes in technology, said Undersecretary Thomas Modly, who has been tasked to drive the initiative. Looking at the future, "it's going to be unpredictable" and the naval services "will need intellectual flexibility, Sailors and Marines able to respond to the changing conditions," he said.

America's strategic competitors, who Modly prefers to call "adversaries," are overtaking U.S. technological advantages, so success will be determined by how America can use the technology, Modly said at a forum sponsored by the U.S. Naval Institute and hosted by the Center for Strategic and International Studies.

When a skeptical member of the audience asked what problem the program is trying to solve, Modly said it was trying to answer the question "is the naval education system really able to provide the officers we will need to solve" the strategic problems the new era will bring.

John Kroger, a former enlisted Marine and experienced educator, said he took the newly created job as the Navy Department's Chief Learning Officer because "better education in the Navy and Marine Corps is fundamentally important to competing." Because the great technological and economic advantages America had in the 1980s and 1990s have been eroded by the great power competitors, "we're not going to be a credible force unless we educate," Kroger said.

Navy Secretary Richard

Spencer launched Education for Seapower, referred to as E4S, on Feb. 12 saying:

"I am convinced, now more than ever before, that the intellectual development of our naval leaders is the most critical warfighting capability for our national security."

E4S was advocated by a panel of former senior Navy, Marine and diplomatic leaders who looked critically at the Department's top educational institutions, including the Naval Academy, Naval Postgraduate School, Naval War College and Marine Corps University, and key civilian academic institutions. It envisioned establishing a Naval Community College, with residential and online course and universal transcripts so "enlisted Sailors and Marines could earn accredited associate's degrees in technology-rich fields, and a new Naval University System that retains the strengths of current educational institutions, while aligning strategic intent in order to provide increased agility," according to the Navy's announcement.

Modly and Kroger said formation of those institutions is still in process.

Kroger said he hoped to be able to name the community college officials soon.

His top immediate priority, he said, was "developing the first-ever comprehensive Navy educational strategy" that would guide the program going forward.

Those two officials and a later panel of the leaders of the Naval Academy, Postgraduate School and Marine Corps

University, wrestled with unresolved issues of how the educational progress of officers and enlisted leaders would be considered in the annual fitness reports and evaluations, how civilian educational institutions would collaborate with the new naval educational structures and how the increased emphasis on education would mesh with the current intensive focus on military training, given the pressure on naval personnel's time.

Kroger said he did not see military training and education being separate efforts but as a needed blend. With the increased technical levels of warfighting, "training is going to become even more complex going forward. The fundamental thing you get from education is how to learn," he said. The officials said the education programs they were creating would include cultural aspects as well as technical fields to better prepare naval personnel to engage with foreign allies and partners and confront the adversaries.

Senior NATO Commander Says Alliance Is Responding to Russian Expansion With Exercises, New Command

NATO has seen the effects of a modernized Russia's navy and its increased activities in all the waters around Europe, and the alliance is responding with multinational exercises and new organizations, including a command focused on ensuring the flow of forces and supplies

across the Atlantic
during a conflict, a senior NATO commander said.

“We see the consequence of modernization of Russian naval forces. We’ve seen increased activity” in the Mediterranean, Black Sea, Baltic Sea and the Atlantic Ocean, said British Air Chief Marshall Peach Stuart, chairman of the NATO Military Committee. “NATO takes its maritime security very seriously. The way we make that real is through a series of patrols, and multinational groupings of ships, in standing naval groups,” Stuart told a Defense Writers’ breakfast on Nov. 13.

“We have to take a balanced approach to that presence and to reassure our allies. And the way we conduct our naval operations is, of course, coordinated with allies and partners” and conducting international exercises, Stuart said. He cited Trident Juncture, a massive exercise involving nearly 50,000 personnel from 31 nations in and around Norway in October and November 2018. Stuart called that “a very impressive grouping of capabilities, including maritime.”

Asked about the concerns expressed by U.S. commanders of the potential challenge to getting reinforcements and supplies across the Atlantic due to the updated and expanded Russian submarine fleet, Stuart said: “Our role is to deter. All our naval operations I just described are part of that deterrent posture. Of course, the Atlantic Ocean is vital to the economic

well-being of the whole of Europe as well as North America. Therefore, we continue to take everything that might affect that very seriously."

"The exact response is to create a new headquarters, called Joint Forces Command in Norfolk," which is co-located with the headquarters of the recently re-established U.S. Navy 2nd Fleet, both of which are commanded by U.S. Navy Vice Adm. Andrew Lewis, he said. Disbanded after the end of the Cold War, the 2nd Fleet was reactivated in August 2018 by then Chief of Naval Operations Adm. John Richardson, who cited the increased tensions between Russia and NATO. Joint Forces "is forming actively as a NATO headquarters as we speak," Stuart said.

"Yes, we do observe the increased [Russian] activity, and we are responding to that increased activity with the formation of an additional headquarters, which its primarily focus would be, should it be necessary to provide the ability to reinforce across the Atlantic Ocean."

Stuart also noted there was "more tension" in the eastern Mediterranean, where Russia has deployed some of its newest ships and demonstrated the capabilities of its latest ship-launched land-attack missiles in support of the Syrian regime. "NATO continues to operate in accordance with international law," he said, adding that "freedom of navigation is important everywhere, not just in Asia."

Despite Russia's increasingly aggressive behavior, Stuart said the alliance has continued its dialog with Moscow through the NATO-Russia Council based at NATO headquarters in Brussels. "That dialog is an important structure, but it is not business as usual. NATO does not recognize [Russian] occupation of Crimea."

Asked about the status of Turkey in NATO after its increased ties with Russia, including buying the S-400 advanced air defense system, Stuart said: "Turkey has been an important ally since the 1950s. That has not changed. ... The capabilities Turkey brings to the alliance are very important," and NATO's relations with the Turkish military "continues very close." As for the S-400, he said, "procurement is a sovereign issue." But, he added, "interoperability is important to the alliance." U.S. officials have said the S-400 cannot be interoperable with NATO systems.

Marines Narrow List of Capabilities for Large Unmanned Aerial System

The Marine Corps has narrowed the list of requirements for its

proposed large
unmanned aerial system (UAS) and is teaming with Naval Air
Systems Command (NAVAIR)
on an unusual program to accelerate development of the
technologies the UAS
would need.

Although
the Marines operate a variety of small and midsize UAS –
primarily for short-
and medium-range intelligence, surveillance and reconnaissance
(ISR) services –
the Corps has long wanted a large pilotless aircraft that
could provide a wide
scope of missions at extended range and longer endurance for
its expeditionary
Marine Air Group Task Forces (MAGTF).

The
program, called the MAGTF Unmanned Aerial System Expeditionary
(MUX), initially
was expected to provide extensive capabilities such as strike
and armed escort
for MV-22 tilt-rotor troop transports. To give it the desired
speed and range
and the ability to operate from amphibious ships or austere
land bases, MUX was
expected to be a tilt-rotor. But research and feedback from
the aerospace
industry indicated that all the desired attributes would
require an aircraft
that could be too large to operate from amphibs and would be
too expensive for
the Marines to buy in sufficient numbers.

As
a result, the Marines have narrowed the requirements for MUX
to “four critical, Tier 1 capabilities” – early warning; ISR;

electronic warfare; and communications relay, Capt. Christopher Harrison, spokesman for Marine Aviation, said in an e-mail. That same information was provided by 1st Lt. Sam Stephenson, a media officer at the Marine Corps Combat Development Command, who said: "MUX will be multi-sensor and will provide early warning, electronic warfare, a C4 bridge and ISR as primary functions."

"The potential to conduct strike capability and logistics at ranges complementary

to those of MV-22 and F-35 will be explored as secondary functions. MUX

will give Naval Expeditionary Forces flexible, persistent and lethal reach," Stephenson said. "The Marine Corps owns two Kaman KMAX CQ-24 UAS – currently assigned to VMX-1 – to expand the cargo UAS envelope, refine MUX experimentation, reduce risk and capitalize on lessons learned from the AACUS program," he added, referring to an autonomous cargo aircraft project.

Harrison noted that the Marines are working with NAVAIR "as they prepare to announce the prize challenge winners as part of the first phase of the MUX development strategy.

The six prize challenges were announced on July 11 at a MUX Industry Day; four of the prize challenges are for individual mission payloads, one for payload adapter designs, and one for system architecture designs."

"The prize challenge is an innovative solution to get

this capability to the Marines faster and get the best performance per dollar of investment,” Capt. Eric Soderberg, the Navy’s Multi-Mission Tactical UAS (PMA-266) program manager, said in a NAVAIR release. “This approach will hopefully prompt industry to use nontraditional ways to develop their concepts.”

NAVAIR said it would award prize challenges in two phases. “The first phase will seek design concepts for payloads and modularity, emphasizing minimal size and weight while maximizing performance. The challenge submissions will be scored and evaluated by a panel of judges. Vendors will receive \$700,000 for first place; \$200,000 for second place; and \$100,000 for third place. The results of the first phase will inform a second prize challenge for airframe and power plants.

The Navy expects to award a series of up to eight prize challenge awards for MUX.” A NAVAIR spokeswoman said the first phase awards were expected before the end of the calendar year. The Marines hope to field MUX in 2026, NAVAIR said.