U.S. Navy Kicks Off Large-Scale Exercise 2021

The Large Scale Exercise logo. *U.S. FLEET FORCES COMMAND*

NORFOLK, Va. – Commander, U.S. Fleet Forces Command, U.S. Pacific Fleet, and U.S. Naval Forces Europe commenced Large-Scale Exercise 2021 in the USFF, PACFLT, and NAVEUR areas of responsibility, Aug. 3, Fleet Forces Command said in a release.

LSE 2021 is a Chief of Naval Operations-directed live, virtual, and constructive, globally integrated exercise that spans multiple fleets. LSE 2021 is designed to refine how we synchronize maritime operations across multiple fleets in support of the joint force. The training is based on a progression of fleet battle problems and scenarios that will assess and refine modern warfare concepts, including distributed maritime operations, expeditionary advanced base operations, and littoral operations in a contested environment.

"We have shifted focus from the individual Carrier Strike Group to a larger fleet-centric approach, challenging fleet commanders' abilities to make decisions at a speed and accuracy that outpaces the adversaries," said Adm. Christopher W. Grady, commander, U.S. Fleet Forces Command. "LSE is more than just training; it is leveraging the integrated fighting power of multiple naval forces to share sensors, weapons, and platforms across all domains in contested environments, globally."

Evaluating and improving naval integration and the U.S. Navy and U.S. Marine Corps' ability to integrate all domains in a high-end global conflict is a necessary investment in the current and future readiness of our forces.

“LSE 2021 provides our Navy-Marine Corps team the opportunity to plan, direct and establish full spectrum naval operations. We must build naval readiness and advance the art and science of naval warfare to be ready to fight tonight – the stakes could not be higher,” said Adm. Samuel Paparo, commander, U.S. Pacific Fleet. “The international rules-based order is essential to our nation, and our partners and allies for peace, security and stability.”

Included in the exercise will be evaluations of experimental technology from a variety of warfare areas including unmanned technologies.

“LSE will test our commanders’ abilities to deliver coordinated effects, from all directions, any time or all the time. It will help us build the necessary muscle memory to do this routinely at the operational to strategic levels of war,” said Adm. Robert P. Burke, commander, U.S. Naval Forces Europe. “By exercising the full weight of our operational fleets, working together in a global mindset, we will truly harness the inherent flexibility of naval forces in controlling the sea and projecting power.”

LSE 2021 is part of an on-going series of exercises that demonstrates the U.S. Navy’s ability to employ precise, lethal, and overwhelming force globally across three naval component commands, five numbered fleets, and 17 time zones. Chief of Naval Operations Adm. Michael Gilday discussed the Large-Scale Exercise during Sea-Air-Space 2021 this week.

Navy Surgeon General: Outbreak on Aircraft Carrier Paved Way for Devising Effective COVID-19 Response

U.S. Navy Sailors assigned to aircraft carrier USS Theodore Roosevelt (CVN 71) are screened for symptoms of COVID-19 in this 2020 photo. *U.S. MARINE CORPS / Staff Sgt. Jordan E. Gilbert*

NATIONAL HARBOR, Md. — The outbreak of COVID-19 on a forward-deployed U.S. aircraft carrier helped Navy medical personnel learn how to fight the virus at sea and prevent its spread ashore, the Navy Surgeon General says.

“Our wakeup call was the Theodore Roosevelt,” Rear Adm. Bruce Gillingham told a panel discussion on the coronavirus pandemic at the Navy League’s Sea-Air-Space Expo in National Harbor Aug. 4.

After COVID-19 was detected among the crew following a port call at Da Nang, Vietnam, in March 2020, the USS Roosevelt was sidelined at Guam for months.

The data gathered by a deployed medical unit aboard the stricken carrier, where more than one thousand crew members tested positive for COVID-19 in early 2020, and one died, “helped us understand the behavior of the virus,” Gillingham said. “It was from that investigation that we really learned the role of pre- and asymptomatic transmission of COVID and how critically important it was to understand and prevent that.”

More than 76% of the crew who tested positive for COVID were not showing symptoms of the virus when tested, and only 55%

later developed any symptoms.

With the experience gleaned from the Roosevelt and a smaller outbreak on the destroyer USS Kidd, “we were able to learn how to diagnose, quarantine and isolate in a shipboard environment, the surgeon general said. That led to a search for ways to create bubbles to manage the risk of COVID for forward deployed personnel, including restriction of movement for 14 days before deployment and testing personnel coming out of quarantine.

Another study by Navy scientists looked at Marine Corps recruits at Parris Island Marine Corps Recruit Depot to assess the response to the virus of healthy young adults in a tightly controlled, congregate setting. “Even in that environment, about one-sixth of recruits still became infected,” Gillingham said.

Both the Parris Island and Roosevelt/Kidd research findings were published in the New England Journal of Medicine. “I’m proud our folks were able to contribute to the national discussion on how to defeat COVID,” he said.

Another panelist, Rear Adm. Dana Thomas, director of Health, Safety & Work-Life at the Coast Guard, said it is also crucial to monitor the mental and emotional health of personnel working under the trying conditions imposed by the pandemic.

In field communications, “I established, early on, Wellness Wednesdays,” hour-long panel sessions with chaplains, doctors and others to talk about stress and anxiety,“bringing that conversation into the ward room or the workplace,” she said.

“That was one thing we will continue as a best practice,” said Thomas, who is also an admiral in the U.S. Public Health Service Commissioned Corps.

Partnerships Key to Confronting Adversaries, Harker Says

Acting Secretary of the Navy Thomas Harker addressing Sea-Air-Space 2021 on Aug. 4. *NAVY LEAGUE / Lisa Nipp*

NATIONAL HARBOR, MD. — That Sea-Air-Space 2021 was able to be held this year shows the power of partnerships, acting Secretary of the Navy Thomas Harker said Aug. 4.

"The fact that we're able to gather today is a testament to the power of partnership — pharmaceutical companies, scientists, government researchers, military and civilian leaders — all working together to develop the vaccine," Harker said. "That's how we must confront all of our adversaries. Together."

Future military planning requires a transparent understanding of needs and limitations, Harker said, adding that such an approach will protect the supply chain while strengthening small-business opportunities.

"Keep challenging the Navy and Marine Corps to innovate and transform," Harker said. "That's how we keep the faith with the American taxpayers and our oversight partners on the Hill. Every dollar is a strategic asset that must be maximized."

The decision-making process for the coming budget has been tough, Harker said, acknowledging that costs associated with personnel, maintenance and recapitalization efforts have exceeded the rate of inflation. As a result, investment planning by vital industrial-base partners will be affected.

“We refuse to create a hollow force. We will not leave holes in units and create a force that leaves our Sailors and Marines without proper training,” Harker said, citing the lessons learned from the separate collision incidents involving the destroyers Fitzgerald and McCain.

The two incidents occurred because Sailors and Marines were asked to do more with less, Harker said.

“One-time fixes aren’t enough,” Harker said. “We have to make changes, putting controls in place to prevent future events. We’re putting procedures in place to ensure that we don’t return to bad habits of the past.”

The acting secretary highlighted efforts to improve a moribund auditing process, after independent government assessments revealed discrepancies and shortcomings he said must be addressed.

Harker called for a “get real, get better approach, demanding rigorous self-assessment, strong characterization of current performance, detailed analysis based on accountability and the opportunity to implement needed improvements.”

Citing personal experience, Harker reiterated the Defense Department’s stance that mental-health counseling must be destigmatized and treated equally with any other form of health care treatment. He also reiterated the overall commitment to rid the ranks of sexual harassment and assault.

“Data shows that a command that tolerates harassment and destructive behaviors increases the risk of sexual assault,” Harker said. “We’ve distributed a watch list which has the top five signals of risk for sexual assault, to assist commanders in both the Navy and Marine Corps to identify warning signs and signals so they can take action to improve their command.”

High-Powered Lasers Boost Anti-Ship Cruise Missile Capability

NATIONAL HARBOR, Md. – The Navy is making considerable progress in the drive to field a high-energy laser system that can meet the demand for a directed energy system capable of defeating anti-ship cruise missiles called for in Chief of Naval Operations Adm. Michael Gilday's 2021 Navigation Plan, Christopher Lloyd, distinguished scientist for Laser Weapon Lethality at Naval Surface Warfare Center, Dahlgren Division, Dahlgren, Virginia, said Wednesday.

After at-sea trials of a 30-kilowatt laser aboard the USS Ponce in 2014-2017, a "150-kilowatt class" system was tested on the USS Portland, a new amphibious transport dock, including the destruction of an unmanned aerial vehicle target May 16, Lloyd said at a Navy League Sea-Air-Space expo briefing.

"We think we're getting to the point where we can actually start building these," Lloyd said. "No one thinks directed energy can solve all problems, but it's another tool we can use." A big advantage of a laser weapon, particularly in the key mission of killing anti-ship missiles, is expanding a surface combatant's magazine and replacing expensive missiles, "which puts us on the right side of the cost curve" against cheap enemy weapons, he said.

Although much of the attention on high-powered lasers is on their role as a weapon, Lloyd said Sailors involved in the tests on Ponce said it was a better sensor than other systems

they had.

The laser “enables real-time combat identification and intent determination,” according to a data sheet Lloyd presented. It also provides speed of light delivery, precision engagement and graduated effect. “We want to be able to scale it up,” for different missions and effects, he added. “Bottom line, it addresses mission gaps we have.”

Although Lloyd would not say how powerful the laser tested on Portland was, he said “it looks like we have a glide slope for 300 kilowatts.”

Tests on Ponce and Portland used separate batteries to power the lasers, which requires gaps in firing to allow battery recharging. Dahlgren experts are working, along with others, to develop more powerful and higher capacity batteries to alleviate that problem, but also look to the greater integrated electrical power systems being developed in surface combatants as primary or backup power for the lasers, he said.

Dahlgren also is working on other high-energy systems, including a “dazzler” that can provide non-lethal crowd control, Lloyd said.

IUU Replacing Piracy as Top Global Maritime Security Threat

Illegal, unreported and unregulated fishing has both economic and security ramifications. *NAVY LEAGUE / Lisa Nipp*

NATIONAL HARBOR, Md. – The ramifications of illegal, unreported and unregulated (IUU) fishing are readily apparent on nations whose economies depend on fishing, but the practice has an impact on U.S. national security as well, a panel of experts said Aug. 4 at Sea-Air-Space 2021.

Moderator Whitley Saumweber, who directs the Stephenson Ocean Security Project, described a scenario in which 90% of the world's fish stocks are either at or above sustainable capacity while demand continues to increase.

"This combines with increasing global competition, particularly from China, which uses its fishing fleets both as a source of economic and food security but also as a way to project soft power on the globe," Saumweber said.

Coast Guard Vice Commandant Adm. Linda Fagan said illegal fishing is replacing piracy as the top global maritime security threat facing the nation.

"It's a sovereignty issue, it's a maritime security issue and it jeopardizes nations' economic food security," Fagan said. "It weakens the global rules-based order that we all rely on for our standard of living."

Tackling IUU, Fagan said, will require both experienced leadership and close work in both building new partnerships and fostering existing one around the globe.

"We recently had the Mohawk, a 270-foot cutter, with another nation's coast guard on board enforcing fisheries rules," Fagan said. "It's those types of partnerships where we provide an asset and the other nation provides their expertise and authority to get after the threat."

Navy Rear Adm. Heidi Berg, the former Director 12 at U.S. Africa Command, said IUU fishing drew considerable attention during her tenure because of the challenges it created in other areas. She specifically cited the effects caused by

China’s growing presence and activity.

“In the Gulf of Guinea, [China] is now devasting those economies,” Berg said. “They engender corruption. They continue to act to support authoritarian regimes that can ensure their continued access.”

Other crimes, such as weapons and drug trafficking, are on the increase as a direct result, Berg said. Terrorist organizations such as al Qaida and the Taliban are gaining influence as well, she added.

Constance Arvis, the acting deputy secretary of state for oceans, fisheries and polar affairs, said the State Department is actively working with other agencies and 69 international partners on a “groundbreaking treaty” called the Port State Measures Agreement.

“We are seeking to build a clean value chain of seafood that only accepts authorized catch from authorized vessels,” Arvis said. “If a port state believes that a vessel that wishes to come in has in fact engaged in IUU fishing, it can be denied port services and entry. Information is going to be shared with other ports to make clear that no IUU fishing enters the international market.”

The Defense Innovation Unit is actively seeking ideas from academia, government and industry by which new technologies such as artificial intelligence and machine learning could help foster better enforcement of fishing regulations and quash IUU fishing in the process.

“We have no pride in where the solution comes from. But it is critical that when we get things to work, we find out [if] we can use the types of data here – space-based SAR [synthetic aperture radar] – to accurately identify activity that’s indicative of IUU fishing and vessels that may be doing it,” said Jared Dunnmon, the unit’s director of artificial intelligence.

Dunnmon said that the unit is conducting a prize challenge for innovators to submit ideas for countering IUU.

“The challenge is open to anyone,” Dunnmon said. “It launches this month, and we’ll run it for about three months.”

AI Could Hammer Out Issues Plaguing Shipbuilding Supply Chain After COVID-19

Rear Adm. Douglas Schofield stated the Coast Guard’s top priorities for shipbuilding sustainment include life-cycle engagement with industry. *NAVY LEAGUE / Lisa Nipp*

NATIONAL HARBOR, Md. — A key to alleviating the chronic challenge of better maintainability and sustainability of increasingly complex naval ships is earlier and constant collaboration between the services acquisition officials and industry, starting with upfront dialogue on requirements for new systems, a panel of service and industry leaders said Wednesday.

Those problems have been acerbated by the COVID-19 pandemic’s impact on the shipbuilding work force and supply chain, the lack of clarity in the Navy’s future shipbuilding plan, the cybersecurity threat and the reoccurring budget uncertainty, the panel members agreed. But help may be in sight with the push for artificial intelligence, which could improve predictability of component failures and demand for spare parts, the leaders told a Navy League Sea-Air-Space expo forum.

“Success for us is working with our industry partners,” looking for feedback, starting with setting requirements for new programs and “getting it right up front,” said Tom Rivers, executive director Amphibious, Auxiliary and Sealift programs at PEO Ships.

Among the top priorities for the Coast Guard is interoperability and “life-cycle engagement with industry and our sister services,” said Rear Adm. Douglas Schofield, Assistant Commandant for Acquisition.

Improving efficiency and savings depends “a lot on collaboration and feedback with the services,” said Larry Ryder, vice president Business Development and External Affairs, Austal USA. “We have put forward ideas that can reduce cost, increase reliability. But we need to work with the services.”

To avoid logjams in major maintenance, “we need industry to tell us where those tricky spots are. … Tell us up front so we knew” how to schedule the work, Rivers said. If they get “feedback up front from industry” where they expect problems, ‘we’ll change our requirements.

“New programs have a lot of requirements” and we need to “work with industry from the start to get right, Rivers said. “We really need to build ships faster.”

Rivers said the Navy also is making internal change, including adopting a plan for data analysis of systems and creating a “war room” that will provide focus and contact with industry partners. And they are designing for maintainability and flexibility in new ships. “We’ve never done that before.”

The Navy major new start is the DDGX, the next-generation major surface combatant, Rivers said. It will draw heavily on technologies and lessons learned from the Arleigh Burke DDG-51 program, he said. His office is engaged in developing the new light amphibious ship to meet the Marine Corps’ need for a

cheaper, more mobile platform for its distributed operations in contested littoral. And to alleviate a serious lack of dry dock capacity on the Pacific coast, Rivers said the Navy will put out a contract this year for a new dry dock.

The three officials agreed that there are concerns with the fragility of the shipbuilding and repair industrial base, with major problems with the second- and third-tier suppliers, some of whom went out of business because of a slowdown in orders during the pandemic. Ryder said industry needs greater stability in demand from the services in order to build and retain a work force.

Schofield raised the new threat of cyberattacks, saying the Coast Guard is working with its service partners and industry on cybersecurity, "making sure industry can facilitate security," a concern echoed by the other two speakers.

New Ship-to-Ship Cargo UAS Could Become Program of Record Soon

The Skyways UAV, taking off from aircraft carrier USS Gerald Ford. *SKYWAYS*

NATIONAL HARBOR, Md. – Naval Air Systems Command is testing out a new unmanned cargo delivery platform that can transport small amounts of cargo between Navy ships, and a NAVAIR official said Wednesday he expects it to become a program of record soon.

A team at NAVAIR was able to take the Skyways unmanned aerial

vehicle and demonstrate it aboard the aircraft carrier USS Gerald Ford (CVN-78) after just a few months, and the Navy is highly interested in going beyond that, Tony Schmidt, director of rapid prototyping, experimentation, and demonstration, said at the Navy League's Sea-Air-Space expo in National Harbor, Maryland.

Schmidt said his team was initially approached by Military Sealift Command, who had discovered that about 80% of the parts they were transporting by helicopter were less than 10 pounds.

"So we said let's see if we can use a Group 2 or 3 UAS to transfer parts back and forth," Schmidt said.

Despite having very little money or resources, Schimdt's team met with industry to identify possible solutions and settled on the Skyways UAV. They delivered the prototype in October 2020. Once Rear Adm. John Meier, commander of Naval Air Force Atlantic, caught wind of the program, he asked them to deliver the aircraft for testing aboard CVN-78 just three months later.

Meier said the team missed that deadline by only a week. "Pretty awesome," he said.

Interest in the effort only grew after that. In July, the team took the UAV on a ship-to-ship mission from the USS Bainbridge (DDG-96) to the USNS Joshua Humphreys (T-AO-188). In recent weeks, they've been in conversations with Navy officials and Schmidt said he is "pretty sure it's going to get picked up as a program of record."

While the new program won't necessarily use the Skyways drone, it will take lessons from it. The team is looking at a delta wing design instead of a standard wing size, and they will experiment to see what works best in a carrier environment, as well as determine how to extend the range of the aircraft.

Navy Must ‘Expand Our Operational Reach’ Through Tactical ISR

Vice Adm. Scott Conn, deputy chief of naval operations for warfighting requirements and capabilities says the Navy is facing challenges in finding a tactial ISR advantage. *NAVY LEAGUE / Lisa Nipp*

NATIONAL HARBOR, Md. – The Navy no longer has a monopoly on key technologies as it did at the end of the Cold War and now must turn to tactical intelligence, surveillance and reconnaissance to gain an advantage over adversaries, a top Navy official said Wednesday.

The key challenge the Navy faces in the coming years is finding that advantage at the tactical level with communications and unmanned assets, Vice Adm. Scott Conn, deputy chief of naval operations for warfighting requirements and capabilities (N9), said during a panel discussion at the Navy League’s Sea-Air-Space expo in National Harbor, Maryland.

“When I say the tactical level, I’m talking at the numbered fleet level, at the task force level, at the task group level,” Conn said. “The world is a different place. At the end of the Cold War, there was an anomaly in history that the U.S. had a monopoly on the key critical technologies, and that’s no longer the case.”

This is particularly true in the areas of range and precision of strike weapons, he said.

“Because of that, we need to expand our operational reach –

our ability to sense, make sense and act," Conn said.

Part of accomplishing that is through better communication and initiatives like Project Overmatch, and another part is using unmanned systems in the air, on the surface and in the sea to identify warfighting advantages at the tactical level.

It is of critical importance for the Navy to master these areas, Conn added.

"This is not about in times of crisis, competing – this is about winning," he said.

Strategic Sealift Must Prepare for Contested Oceans, Panelists Said

The Henry J. Kaiser-class underway replenishment oiler USNS

Yukon (T-AO-202), right, prepares to conduct a consolidated loading with the commercial tanker MT Empire State. U.S. Navy / Mass Communication Specialist 1st Class Patrick W. Menah Jr.
NATIONAL HARBOR, Md. – The nation's sealift components are used to operating in peaceful seas and permissive environments but must prepare now for times when control of the seas is not assured, a panel of maritime leaders said.

Speaking Aug. 4 at the Navy League's Sea-Air-Space expo at National Harbor, Maryland, were Douglas Harrington, deputy associate administrator for Federal Sealift at the Maritime Administration (MARAD); Christopher Thayer, director, Maritime Operations, Military Sealift Command (MSC); and Adam Peterson, of the government business development team at APL. The panel was moderated by Erica Plath, director, Strategic Mobility/Combat Logistics, Division, Office of the Chief of Naval Operations, U.S. Navy.

Thayer pointed out that sealift "capability today is far more than it was in 1990" when large numbers of sealift ships were activated for Operation Desert Storm. He said that sealift was again at an inflection point, with the Navy' preparation for distributed maritime operations in contested environments.

He said that, during distributed operations, the nation's maritime logistics forces may not always have escorts or overwatch and must "be prepared to operate and evade the enemy."

Thayer also stressed the need for counter-UAS systems, anti-jam capabilities for GPS, the need for cybersecurity and the ability to operate under emissions control.

Communications is "a huge vulnerability," Thayer said, noting that mobile communications capabilities are being deployed on some ships with tactical advisers.

Harrington also stressed the need for improved, more resilient communications capabilities for MARAD's Ready Reserve Force

(RRF). He noted the current reliance on satellite communications and the effect on morale that emissions control would have on the crews.

To adapt to providing logistics in a contested environment, Thayer said that MSC was working on concepts such as re-loading missiles in vertical launch cells while ships are underway, underway replenishment using unmanned aerial vehicles and refueling the combat logistics ships from commercial ships using modular CONSOL (consolidated cargo replenishment) adapter kits.

Harrington discussed the need for recapitalization of the RRF MARAD's Ready Reserve Force and new, comprehensive strategy for equipping strategic sealift with new technology and regulations. He noted the increasing size and weight of defense cargoes. He advocated building increased resilience as well as cybersecurity.

He also said the government must "recall and re-focus on naval operations in a contested environment."

Peterson pointed out the dramatic decline of the U.S.-flag merchant marine since 1960, now less than 0.5% of the 43,000 ships (displacing 1,000 or more gross weight tons) in international trade. He stressed that the government needs to develop more incentives to keep commercial vessels available in peacetime and war.

Harrington praised the "significant period of recapitalization," which includes the construction of first of five National Security Multi-Mission Vessels, which will replace older ships and train mariners with modern technology now found on many merchant ships.

Asked about the Navy's plans to operate autonomous unmanned ships in its fleet, Thayer noted that it is "hard to refuel an autonomous ship at sea."

Coast Guard Rings in Birthday at Sea-Air-Space

Coast Guard and Navy League officials celebrate the service's 231st birthday on Aug. 4. *NAVY LEAGUE*

NATIONAL HARBOR, Md. — The U.S. Coast Guard celebrated its 231st birthday on Aug. 4 and Commandant Adm. Karl Schultz and service officials said it is increasing cooperation with international partners, working with industry on energy projects such as wind farms and making changes to increase diversity and guard retention.

"I think it's an exciting time for us," Schultz said, telling the audience at Sea-Air-Space 2021, "let us figure out where we can team up with you."

Ann Castiglione-Cataldo, director of international affairs and foreign policy, said the service is working to build capable partnerships around the world to tackle such issues as illegal, unreported, and unregulated fishing and climate change.

"All coast guards are grappling with this," she said.

Rear Adm. John Mauger, assistant commandant for prevention policy, said his office is working to maintain safe use of the waterways for all users, which includes working with states and localities on installing coastal wind farms and assisting with commercial space launch operations.

There are currently only five wind turbines active off of Rhode Island and two in Virginia, Mauger said, but many more projects are in the works, and the service is advising on

their location to help maintain access to waterways.

Commercial space launches are also coming to the fore. The Coast Guard helps keep waterways clear near launch sites. In the old NASA days, that just meant monitoring areas in Florida and Texas, but commercial space launches can occur from many more places, including floating platforms.

The Coast Guard has had issues with retaining female Coast Guard personnel, said Michel Godfrey, the director of civilian human resources, diversity and leadership. At one point, retention rates past the 15-year mark for women lagged behind men by 10%, but recent efforts have cut that to 3%.

One such effort is the parental leave program, which pulls in Coast Guard reservists to temporarily replace service members on maternity leave.

“They come back and they are a stronger member of the Coast Guard,” Godfrey said.

Schultz said, “Talent management is where we win or lose in the Coast Guard.”

After the presentation, Navy League National President David Reilly and CEO Mike Stevens presented Schultz with the Admiral Arleigh Burke Leadership Award, the Navy League’s highest honor. He then celebrated the Coast Guard’s founding by Alexander Hamilton with a cake.