

# USS Philippine Sea Interdicts Over \$2.8 Million of Heroin in North Arabian Sea



Sailors assigned to the visit, board, search and seizure Sailors team of the guided-missile cruiser USS Philippine Sea (CG 58) board a dhow suspected of carrying narcotics in the international waters of the north Arabian Sea, Jan. 31, 2021. U.S. Navy

BAHRAIN – The guided-missile cruiser USS Philippine Sea (CG 58), deployed to U.S. Fifth Fleet and operating in support of the Combined Maritime Forces (CMF), interdicted a shipment of more than 600 pounds (275 kilograms) of suspected narcotics from a dhow in the international waters of the North Arabian Sea, Jan. 30, the CMF said in a Feb. 2 release.

Seven bags of suspected narcotics were seized and tested, resulting in a seizure of approximately 600 pounds (275

kilograms) of suspected heroin, worth \$2.89 million wholesale. This seizure, conducted in direct support of CMF's Combined Task Force (CTF) 150, marks the seventh CMF drug seizure since October 2020.

To mitigate the risk of contracting and spreading COVID-19, the boarding team undertook carefully executed precautionary measures during and after the boarding, to include decontamination of all seized contraband.

CTF-150 conducts maritime security operations outside the Arabian Gulf to disrupt criminal and terrorist organizations, ensuring legitimate commercial shipping can transit the region, free from non-state threats. CTF-150 is currently commanded by the Royal Canadian Navy, now leading the task force for a fifth time.

---

## **Galini: Navy Considering Land-Based Test Site for Integration of Frigate Systems**



An artist's rendering of the Constellation-class guided-missile frigate (FFG), which may have some of its systems tested on land. U.S. Navy

ARLINGTON, Va. – The commander of Naval Sea Systems Command (NAVSEA) praised the risk-mitigation qualities of land-based testing and prototyping of ship systems and said the Navy said the Navy is considering it for some level for the Constellation-class guided-missile frigate (FFG).

NAVSEA Commander Vice Adm. William Galinis, speaking during a webinar of the National Defense Industrial Association's Expeditionary Warfare Conference, said the Navy is using more land-based testing and integration to reduce risk before the systems are installed on a ship.

Land-based testing "is not something we can do for every platform, but judicious use of land-based testing where it makes sense is a good engineering development tool and a risk mitigator."

Galinis noted that extensive land-based testing is being conducted for the Flight III Arleigh Burke-class guided-

missile destroyer (DDG) at the Naval Surface Warfare Center Philadelphia Division.

“As we upgrade to the Flight III [of the Arleigh Burke class], we need additional cooling capacity, additional power-generation capacity, higher voltage level,” he said. “That electric plant is being tested right now in Philadelphia from the prime mover all the way to the power conversion modules.”

The SPY-6 radar, built by Raytheon Technologies for the Flight III DDG, is being tested at the Lockheed Martin Aegis test site in Moorestown, New Jersey, with the combat systems software, “from the power-conversion unit all the way out through the array face.”

Major propulsion components of the new Columbia-class ballistic-missile submarine, being built by General Dynamics Electric Boat, also are going through extensive land-based testing at Philadelphia.

“We will probably do something along that line for the Constellation-class frigate,” Galinis said. “We’re working through the details of that right now.”

Because the hull and propulsion of the Constellation is from a proven, parent design – the Fincantieri FREMM frigate – land-based testing is likely to focus on integration of systems, particularly combat and sensor systems.

Galinis said there are changes to the frigate in terms of “buy America” requirements and certain Navy requirements.

---

# Mine Warfare Director: Detect-to-Engage Timeline Needs to be Speeded Up



Avenger-class mine countermeasure ships USS Pioneer (MCM 9), USS Chief (MCM 14) and an MH-53 helicopter from Helicopter Mine Countermeasures Squadron 14 conduct mine hunting training exercises in this 2020 photo. U.S. Navy / Information Systems Technician 2nd Class James Greeves

ARLINGTON, Va. – The Navy official in charge of mine warfare development said strides are needed to decrease the search and neutralization time of mine counter-measures operations.

“We need to get faster; we need to speed the timeline up,” said Capt. Robert Baughman, director, Mine Warfare Division at the Naval Surface and Mine Warfighting Development Command in San Diego, speaking at a Feb. 2 webinar of the National Defense Industrial Association’s Expeditionary Warfare

Conference. "Improving the detect-to-engage timeline is vital as we shift from a ship in a minefield to off-board and autonomous systems."

For single-pass detect-to engage, with "on-board processing and high-end autonomous target recognition, we can neutralize the mine immediately," Baughman said. "Machine learning is improving this capability, but we need systems to either pass contacts during the mission cycle, or immediately upon recovery in the interim, telling what it assesses to be a mine.

"In the meantime, industry can help us with in-stride data transfer, transmitting high-quality data beyond line of sight that will help us get data back to the ship to start the post-mission analysis, and not wait till the end of a 20-hour mission, which then requires 20 hours of post-mission analysis on the back side," he said.

The captain also said, "capabilities need to be smaller, more expeditionary, and more reliable. Unmanned systems need to be highly modular, built with open architecture in mind, with hi-rez sensors, and to be networked systems of systems. Sailors must be able to fix them on the ship and easily modify them for specific missions. We can't rely on a team of contractors or Ph.D.'s to effect repairs or change out sensors in the field."

Being acoustically quiet and having a low signature overall are important, Baughman said.

Single-use minesweepers are not affordable at this point, he said. "All future systems and enabling technologies should have this as a consideration in their design and development.

"Communications and navigation systems must be resilient and also be able to operate in denied environments for sustained periods of time," he said. "Having a clandestine capability can help with this, especially when we talk about mining

technology. If they're networked, we can control them better, turning them on or off as required to avoid detection at a time of our choosing.

"For all of these systems, power and portability are extremely important," the captain said. "We need systems with long duration that can conduct surveys and persistent station keeping for whatever we tack UUVs to do. We need to be platform agnostic.

"We are a more expeditionary, off-board, distributive force than we were even five years ago, and regularly integrate with our coalition partners," Baughman said. "So, being able to rapidly and seamlessly share info and make timely decisions as necessary through our tactical decision support aids, up and down the decision process. File size, classification, bandwidth and latency constraints can't hinder our ability to share data across the force. Data management is becoming more and more of an issue."

---

## **DMO is Navy's Operational Approach to Winning the High-End Fight at Sea**



Vice Adm. Phil Sawyer inspects sailors of the Royal Malaysian Navy in this 2018 photo. U.S. Navy / Mass Communication Specialist 1st Class Chris Krucke

Navy Vice Adm. Phil Sawyer says the Chief of Naval Operations's Navigation Plan 2020 and the Distributed Maritime Operations (DMO) concept are central for the Navy going forward and for the Navy and Marine Corps team's ability to conduct enduring sea control and power projection missions.

Speaking at the NDIA Expeditionary Warfare Conference on Feb. 2, Sawyer, the deputy CNO for Operations, Plans and Strategy, said enduring means as a maritime nation, "the sea control and power projection mission hasn't changed in 200 years, but the way we do it today has."

The Navigation Plan 2020, released last month by CNO Adm. Mike Gilday, and the Tri-Service Maritime Strategy released last year, assert that the U.S. and Navy are "involved in a long-term competition that threatens our security and our way of life. Russia and China are both undermining the free and open conditions that has enabled the world to largely prosper since the end of World War II."

Both countries are attempting to unfairly control sea-based resources, intimidate their neighbors, and both are turning incremental gains into long-term advantages, with Crimea and the South China Sea as examples.

Although we must be clear-eyed about both Russia's and China's actions and intentions, Sawyer said China is the long-term strategic threat to the U.S. "That is not to discount Russia, but it looks like China is our pacing threat."

"The nation needs a larger hybrid fleet – consisting of manned and unmanned platforms," Sawyer said "But, it's not just the number, but it's about the composition of the fleet."

Sawyer said unmanned platforms will play a very important role, from ISR above, on and below the sea, to platforms that are large weapons batteries to aerial refuelers.

He said it's easy to fixate on numbers, but the mix is also very important. "Getting the right mix of platforms is just as important as the total number."

The Navigation Plan calls for a lethal, better connected fleet – a fleet that is able to deliver synchronized lethal and nonlethal effects across all domains. That includes distributed weapons of increasing range and lethality. Hypersonic and directed energy weapons are key R&D efforts for the Navy, he said.

Tying the Navigation Plan to the theme of the NDIA conference, "Distributed Maritime & Expeditionary Operations in a Peer Contested Environment," Sawyer said, "DMO is principally a warfighting concept. It's our operational approach to winning the high-end fight at sea."

According to Sawyer, DMO is geographically distributed naval forces integrated to synchronize operations across all domains. "DMO is a combination of distributed forces, integration of effects, and maneuver. DMO will enhance battle

space awareness and influence; it will generate opportunities for naval forces to achieve surprise, to neutralize threats and to overwhelm the adversary; and it will impose operational dilemmas on the adversary.”

A key capability to achieving DMO is the Naval Operational Architecture, which Sawyer said will enable decision superiority at speed in a high-end fight. “It’s the connective tissue between sensors, platforms and weapons, and its central to our DMO operating concept,” Sawyer said. It’s more than “every sensor connected to every shooter.”

It includes the infrastructure (computing power and data storage); the network (data links, antennas, routers, and protocols); a data architecture and a data strategy; and finally, the tool (tactical decision aids to help analyze and display data with understandable and actionable information to the operators).

The ability to communicate and share information is critical in a contested environment, he said.

“In peacetime, or against lesser adversaries, we know how to C2 distributed forces. We do it all the time. We know how to synchronize effects in time. We know how to dynamically maneuver our forces. What we working on is how to do this – assuming every domain is contested, or denied – and with speed, such that we decision superiority.”

Another DMO imperative is logistics, and an enterprise to operate and sustain us in a contested space. That will require new platforms, manned and unmanned, to sustain small, dispersed units far to the front.

DMO is not a Navy or Marine Corps problem. “DMO is a naval concept. Navy and Marine Corps integration is pivotal to us winning the high-end fight, particularly in the Pacific,” Sawyer said. “In the future, the Marine will be able to project power in order to support sea control or sea denial

efforts.”

Sawyer said the Navigation Plan fully supports DMO, and fueling those capabilities necessary to fully realize the DMO concept. “New capabilities are important. But while the fleet waits for the introduction of these capabilities, we are moving out and exercising with what we have.”

---

## **Burke: Keflavik Important to North Atlantic Operations**



Sailors assigned to Patrol Squadron (VP) 4 shovel snow away from the port engine of a squadron P-8A Poseidon maritime patrol and reconnaissance aircraft on the the apron of Keflavik Air Base, Jan. 03, 2020. U.S. Navy / Lt. Cmdr. Ryan McFeely

ARLINGTON, Va. – The U.S. Navy's top admiral in Europe highlighted the importance of using the airfield in Keflavik, Iceland, in the current era of great power competition, as a base for maritime patrol and anti-submarine warfare (ASW) aircraft.

"We need to operate there," said Adm. Robert Burke, commander, U.S. Naval Forces Europe/Africa, speaking Feb. 2 at a webinar sponsored by the U.S. Naval Institute and the Center for Strategic and International Studies, funded by Huntington Ingalls Industries. "There were 12 P-8s on the ground when I was there at the end of October. They were very busy. I can tell you it wasn't an exercise and it's not hard to imagine why."

Burke referred the listener to 2019 when "there were open-source reports of 10 Russian submarines operating in the Arctic and the North Atlantic. From there, they head into the Atlantic and they go there to exercise their ability to hold Europe and the continental United States at risk with land-attack cruise missiles."

The admiral pointed out that "[s]ome of those missiles, in the not-to-distant future, will be capable of hypersonic speeds. That's a real threat and that's something we have to be ready to address."

The international airport in Keflavik was the site of a U.S. naval air station during the Cold War, with an ASW operations center. A squadron of P-3 Orion maritime patrol aircraft was deployed there on a rotational basis. A detachment of U.S. Air Force F-15 Eagle fighters also was present to intercept Soviet bombers that ventured over the Atlantic.

Iceland has no armed forces other than a coast guard, but Keflavik represents an important contribution to the U.S. and NATO's capabilities with Keflavik's airfield.

With mobile operations command centers, the Navy rapidly can

deploy one to Keflavik to stand up an ASW command, control, and analysis capability for deployed maritime patrol aircraft.

Two other North Atlantic nations are acquiring P-8A aircraft. The U.K. Royal Air Force already is operating its new P-8s, having reconstituted a maritime patrol capability after the 2011 retirement of its Nimrod aircraft. The first P-8A for the Royal Norwegian Air Force is now under construction to replace its P-3 aircraft. Other NATO nations including Germany, Spain, Portugal and Greece operate P-3s, and France and Italy operate Atlantique aircraft.

Burke praised the P-8 for its “incredible legs, incredible capabilities.”

While the Russian submarine force is much smaller than its peak during the Soviet era, it has continued to push development of modern submarines, now in their sixth generation.

---

## **HII Awarded \$175M U.S. Navy CVN Support Contract**



The USS Enterprise, left, passes the USS George H.W. Bush in this 2011 photo. Huntington Ingalls Industries' Technical Solutions division has been awarded a contract for maintenance, training and planning support of U.S. Navy carriers. U.S. Navy

NEWPORT NEWS, Va. – Huntington Ingalls Industries' Technical Solutions division was awarded a contract last week to provide maintenance, training and planning support for U.S. Navy aircraft carriers, the company said in a Feb. 1 release. The indefinite-delivery/indefinite-quantity contract includes a five-year ordering term, with a total potential value of \$175 million.

"We are very pleased the U.S. Navy has entrusted us to support the readiness of one of our nation's most important power projection platforms," said Garry Schwartz, president of Technical Solutions' Defense and Federal Solutions business group. "For nearly four decades, we've partnered with the Navy on this critical program, and we look forward to continuing to advance our nation's fleet sustainment for years to come."

HII will provide engineering services, maintenance and operator training as well as technical and repair services in support of maintenance and planning for the overhaul, modernization and repair of shipboard elevators, cargo-handling equipment and associated systems installed within U.S. Navy aircraft carriers.

The work, contracted by Naval Sea Systems Command, will be performed on board U.S. Navy aircraft carriers in Norfolk, Virginia; San Diego, California; Bremerton and Everett, Washington; Japan, and other fleet concentration areas to be determined.

---

## **BAE Systems to Sustain Air Traffic Control Systems Under \$65.7M Navy Contract**



Under the new contract, BAE Systems will provide sustainment and engineering services for air traffic control platforms, similar to the expeditionary ATC radar shown here being carried by a Marine Corps Humvee. U.S. Marine Corps MCLEAN, Virginia – The U.S. Navy selected BAE Systems for a five-year \$65.7 million single-award indefinite delivery, indefinite quantity contract for air traffic control (ATC) platform sustainment and engineering services, the company said in a Feb. 1 release.

BAE Systems will continue to use its engineering, technical, and operational expertise to develop, produce, equip, test, evaluate, sustain, and update key expeditionary ATC aviation systems for the Naval Air Warfare Center Aircraft Division's Webster Outlying Field.

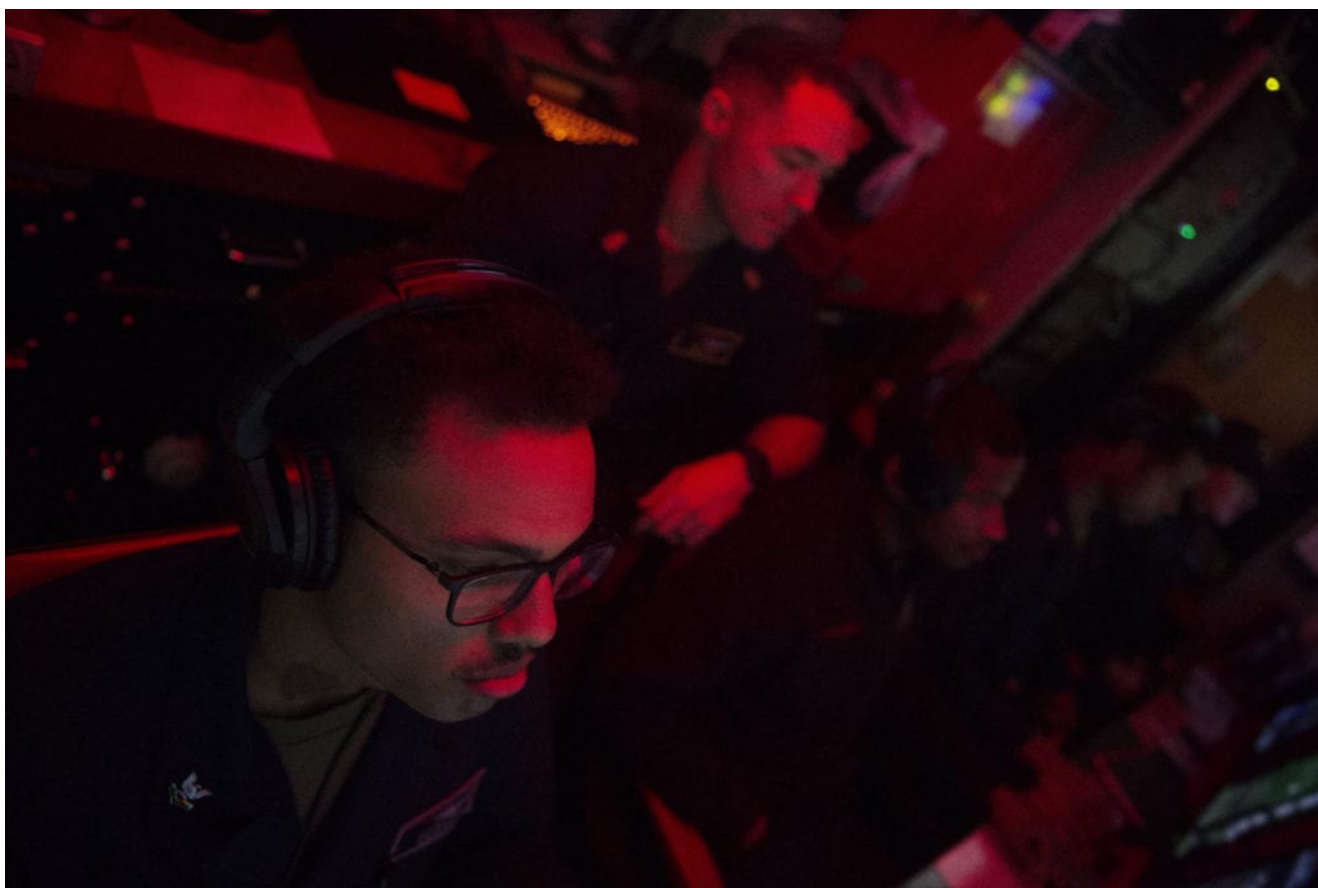
"With this win, BAE Systems will provide expeditionary forces with the capability to quickly establish an airfield with the radar and communications systems to safely recover and launch aircraft," said Lisa Hand, vice president and general manager of BAE Systems' Integrated Defense Solutions business. "We serve as the automation expert and technical coordinator, responsible for development and improvement of real-time ATC computer systems. Our radar technicians deploy around the world to support the warfighter; their work is resulting in quicker turnover to the end user, improved hardware reliability, and more accurate installation and precision in the field."

This new contract continues BAE Systems' more than a decade of supporting critical work on key systems, including the Standard Terminal Automation Replacement System (STARS); Air Traffic Navigation, Integration, and Coordination System (ATNAVICS); Airfield Mobile Tactical Air Navigation System (AMTAC); and ATNAVICS Data Link System (ADLS). Under the contract, the company will develop and maintain operational software and supporting test beds, field change programs, and supplies for ATC systems. These systems are integral ATC tools

that enhance platform flight safety, especially when end users are operating in new or rough terrain airfields with no existing military base.

---

## **Artificial Intelligence, Machine Learning Top Naval Intelligence Technology Needs, Director Says**



Sailors stand watch in the sonar room of the Los Angeles-class fast-attack submarine USS Chicago (SSN 721) in support of Valiant Shield 2020. Valiant Shield is a U.S. only, biennial field training exercise (FTX) with a focus on integration of joint training in a blue-water environment among U.S. forces.

This training enables real-world proficiency in sustaining joint forces through detecting, locating, tracking, and engaging units at sea, in the air, on land and in cyberspace in response to a range of mission areas. U.S. Navy / Mass Communication Specialist 1st Class Derek Harkins

ARLINGTON, Va. – The U.S. Navy will need more help from artificial intelligence systems to answer the technology challenge posed by vast amounts of data and information available from every domain, the deputy chief of naval operations for information warfare says.

The challenge is with “the amount of data and information that is out there,” according to Vice Adm. Jeffrey Trussler, who is also director of Naval Intelligence. “We’re well beyond the point where rooms full of analysts” can handle digital information coming from open source, signals and acoustical intelligence, Trussler told a Jan. 27 webinar hosted by the Intelligence and National Security Alliance. “We’re going to have to put machines on that, with the algorithms in place to manage it.

“Every advancement that exists for AI [artificial intelligence] and ML [machine learning], we need to suck in and learn from,” Trussler said when asked about the top Naval Intelligence technology needs. “I think across the board, AI/ML is what is top.”

Trussler said there were already “some tremendous AI projects underway” at the acoustics intelligence agency. Of all the domains from seabed to space, only the U.S. Navy deals with intelligence gathering underseas, said Trussler, a submariner for most of his career. “And that is the domain where we still have a dominant margin. But we need to keep pressing and keep learning in that arena.”

He also urged industry to keep pressing the Navy. “The innovations and ideas from industry are huge. Keep pressing us. Keep knocking on the door. Keep showing us what’s available and what you can do,” he said. However, the Navy

isn't looking for proprietary technology that can't mesh with existing or future platforms. "We're going to be more interested in 'How is this going to link into the systems we have? How is this going to help us advance a collaborative web to close our kill chains?'"

In the future, Trussler said, the Navy Department won't invest in "proprietary things that we can't crack open. That aren't open architecture, that we can link in with the rest of our systems."

---

## Sea Dragon Exercise Tests ASW Skills for Maritime Patrol Aircraft Crews



Members of the Royal Australian Air Force, Japan Maritime Self Defense Force, Indian navy and Royal Canadian Air Force, along

with Patrol Squadron (VP) 5's "Mad Foxes" and VP 8's "Fighting Tigers," pose for a photo at the conclusion of Exercise Sea Dragon. U.S. Navy / Lt. Cmdr. Kyle Hooker  
Maritime Patrol aircraft and crews from five partner nations gathered at Andersen Air Force Base in Guam to participate in Sea Dragon 2021 Anti-Submarine Warfare (ASW) exercise. The exercise wrapped up Jan 27.

The Sea Dragon series of exercises are led by commander, Patrol & Reconnaissance Force, 7th Fleet (CTF-72), based out of Misawa, Japan. They are intended to demonstrate advanced ASW tactics, while at the same time continuing to build on multinational participation with U.S. allies and partners, as well as commitment to the security of the Pacific region.

This year, P-8A Poseidon Maritime patrol and reconnaissance aircraft and crews from Patrol and Reconnaissance Squadrons (VP) 5 and 8 trained together with the counterparts from the Royal Australian Air Force, Japan Maritime Self Defense Force, Indian navy and the Royal Canadian Air Force during the exercise.

The "Mad Foxes" of VP-5 are currently deployed to Kadena, Okinawa, and the "Fighting Tigers" of VP-8 are operating from Misawa, Japan. Both squadrons are based at Naval Air Station Jacksonville, Florida.

The U.S., Australia and India took part in the exercise with Boeing P-8 Poseidon aircraft. Japan flew the Kawasaki P-1, while Canada operated the CP-140 Aurora.

Sea Dragon 2021 centered on ASW training and excellence. The exercise included 250 hours of ground and classroom training and 125 hours of in-flight training ranging from tracking simulated targets to the final problem of finding and tracking Los Angeles-class nuclear submarine. The classroom training sessions helped the aircrews build plans and discuss how to incorporate tactics, capabilities and equipment for their respective nations into the exercise.

At the beginning of the exercise, Lt. Cmdr. Kyle Hooker, officer in charge of the VP-5 detachment, said he was eager for the opportunity to further develop our partnerships with Japan, India, Canada, and Australia during at Sea Dragon 2021.

“The COVID environment will be challenging for all our participants, but I know we will come together to adapt and overcome while executing our goal of anti-submarine warfare interoperability,” he said.



A P-8A Poseidon from Patrol Squadron (VP) 5 is prepared for its first training event of Sea Dragon 21. It involved tracking several Expendable Mobile Anti-Submarine Warfare Training Target's (EMATT), which simulate the characteristics of a submarine. U.S. Navy / Lt. Cmdr. Kyle Hooker VP-5 pilot Lt. Reed Arce said his squadron viewed Sea Dragon 2021 as an opportunity for both learning and competition.

“VP-5 was certainly looking forward to the opportunity to flex

our ASW muscles and enjoy some friendly competition with our allied partners during Exercise Sea Dragon. We learned so much when comparing tactics between aircrews, and the ability to constantly improve our warfighting skills. We hope to leave Guam with all participants being at their peak performance in prosecuting sub-surface threats anywhere in the world," he said.

VP-8 pilot Lt. Joseph Moralesvargas said Sea Dragon 2021 gave his squadron the chance to coordinate and be on station with other crews and other countries.

"The opportunity to speak with other operators and hear their philosophy and insight on ASW has given me new perspective," he said. "I can't think of any other exercise that would give us this chance," he said.

Sea Dragon culminated with live tracking exercises with the nuclear-powered fast attack submarine, USS Providence (SSN-719) acting as the adversary.

The Sea Dragon events are graded, and the nation with the highest overall score wins the Dragon Belt award. The belt was awarded to the Royal New Zealand Air Force last year. This year, Royal Canadian Air Force 407 Long Range Patrol Squadron, which operates the CP-140 Aurora, had the highest total point score, and will bring the coveted Dragon Belt home with them to Canadian Forces Base Comox in British Columbia.

The importance of ASW in the Indo-Pacific region cannot be understated, with growing numbers of Chinese, Russian and North Korean submarines. The ability for allies and partners to work together with capable MPA aircraft and crews to successfully conduct ASW is vital to counter this threat.

---

# General Dynamics Receives \$43.2M Contract for Columbia/Dreadnought-Class SSBN Fire Control Systems



An artist's rendering of the future Columbia-class ballistic missile submarines. The 12 submarines of the Columbia class are a shipbuilding priority and will replace the Ohio-class submarines reaching maximum extended service life. U.S. Navy PITTSFIELD, Mass. – The U.S. Navy recently awarded a contract modification to General Dynamics Mission Systems that includes a broad scope of work for the Columbia and Dreadnought ballistic-missile submarine class to support development, production, and installation requirements.

This \$43.2 million award is comprised of development,

production, installation, and deployed-systems support exclusively for the Columbia/Dreadnaught (CLB/UKD) class of U.S. and U.K. submarine strategic weapons systems and subsystems and coincides with one of the largest manufacturing floor expansions at the Pittsfield, Massachusetts facility.

General Dynamics Mission Systems' Maritime and Strategic Systems line of business will deliver fire control systems for the U.S. Navy's first Columbia class submarine (US01) and the first U.S. Columbia class training facility (Kings Bay Trident Training Facility, KB-TTF) as well as installation support and pre-deployment planning for both U.S. and U.K. sites. This contract also includes CLB/UKD design completion scope and continuation of design activities for the first planned refresh of the CLB/UKD fire control system, as well as design support for CLB/UKD planning at the KB-TTF and procurement of the infrastructure material to support the new Trident Training Facility labs. The majority of the work in support of this contract will take place in Pittsfield.

"In November, we celebrated with our Navy partner, 65 years of outstanding support to our nation's strategic deterrent mission," said Laura Hooks, vice president of General Dynamics Mission Systems' Strategic Systems business. "We are entering the next era of development and production for the Navy's fire control system on the newest fleet of submarines that will extend this deterrent capability for another 65 years."