

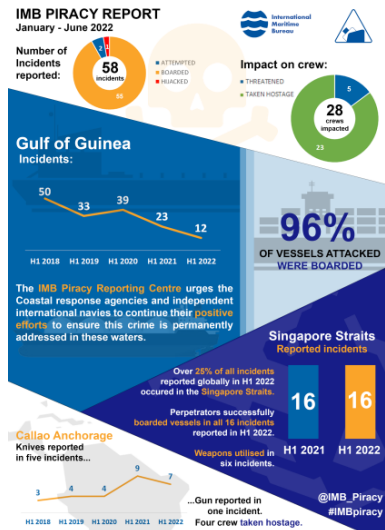
NAVY NEWS WEEK 28-5

14 July 2022

Global piracy and armed robbery incidents at lowest level in decades

London and Kuala Lumpur, 12 July 2022 –

The ICC International Maritime Bureau (IMB) received the lowest number of reported incidents for the first half of any year since 1994 – a testament to its pivotal role in



raising awareness to make waters safer. IMB's latest global piracy report details 58 incidents of piracy and armed robbery against ships – the lowest total since 1994 – down from 68 incidents during the same period last year. In the first six months of 2022, IMB's Piracy Reporting Centre (PRC) reported 55 vessels boarded, two attempted attacks and one vessel hijacked. IMB Director Michael Howlett said: "Not only is this good news for the seafarers and the shipping industry it is positive news for trade which promotes economic growth. But the areas of risk shift and the shipping community must remain vigilant. We encourage governments and responding authorities to continue their patrols which create a deterrent effect." While the reduction in reported incidents is indeed encouraging,

the IMB PRC continues to caution against complacency – vessels were boarded in 96% of the reported incidents. Despite no crew kidnappings reported during this period, violence against and the threat to crews continues with 23 crew taken hostage and a further five crew threatened.

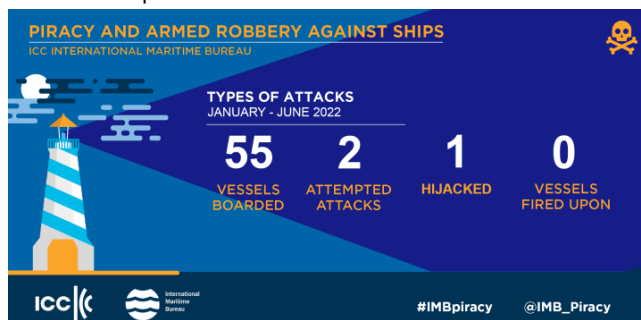
Cautious gains in the Gulf of Guinea

Of the 58 incidents, 12 were reported in the Gulf of Guinea, ten of which defined as armed robberies and the remaining two as piracy. In early April, a Panamax bulk carrier was attacked and boarded by pirates 260NM off the coast of Ghana. This illustrates that despite a decrease in reported incidents, the threat of Gulf of Guinea



piracy and crew kidnappings remains. On being notified of the incident, IMB PRC immediately alerted and liaised with the Regional Authorities and international warships to request for assistance. An Italian Navy warship and its helicopter responded and instantly intervened, saving the crew and enabling the vessel to proceed

to a safe port under escort.



IMB PRC commends the prompt and positive actions of the Italian Navy which undoubtedly resulted in the crew and ship being saved. It urges the Coastal response agencies and independent international navies to continue their efforts to ensure this crime is permanently addressed in these waters which account for 74%

of crew taken hostage globally.

Cautious gains in the Gulf of Guinea



be at risk with weapons reported in at least six incidents.



at least three incidents with one crew reported threatened.



to possess the capability and capacity to carry out incidents, and all merchant ships are advised to adhere to the recommendations in the latest Best Management



Practices, while transiting in these waters. prompt forwarding of reports, and liaison with response agencies, broadcasts to shipping via GMDSS Safety Net Services, and email alerts to CSOs, all provided free of cost, help the response against piracy and armed robbery globally.

As evidenced by the standing up of multiple regional co-operation, reporting and response mechanisms, its reports have over time increased awareness, resulting in the allocation of adequate resources to make waters safer.

Vessels continue to be targeted and boarded by local perpetrators when transiting the Singapore Straits, which account for over 25% of all incidents reported globally since the start of the year. The perpetrators were successful in boarding the vessels in all 16 incidents reported. While considered low level opportunistic crimes, crews continue to

be at risk with weapons reported in at least six incidents. Outside the Singapore Straits, the Indonesian archipelagic has seen a slight increase in reported incidents for the first time since 2018, with seven incidents being reported compared to five over that same period last year. Five vessels were boarded at anchor and one each while the vessels were at berth and steaming. Weapons were reported in

Threat subsists in the Gulf of Aden

Although no incidents were reported there since the start of the year, the threat of piracy still exists in the waters off the southern Red Sea and in the Gulf of Aden, which include the Yemeni and Somali coasts. Although the opportunity for incidents has reduced, the Somali pirates continue to possess the capability and capacity to carry out incidents, and all merchant ships are advised to adhere to the recommendations in the latest Best Management Practices, while transiting in these waters.

IMB Piracy Reporting Centre

Founded at a time when seafarers had little option to report incidents, IMB PRC remains a single point of contact to report all crimes of maritime piracy and armed robbery, 24 hours a day. Since 1991, their

Source: <https://www.icc-ccs.org>

Deputy PM looking beyond SSNs amid US trip

11 July 2022

By: Charbel Kadib

Other advanced defence capabilities to be explored under the AUKUS agreement may prove to be more important than Australia's prospective fleet of nuclear-powered submarines, according to the Deputy PM. Deputy Prime Minister and Minister for Defence Richard Marles is in the United States for meetings with US Defence Secretary Lloyd Austin, senior government officials, members of the US Congress, and the defence and national security community. The trip, scheduled to conclude this Thursday (14 July), is expected to focus on "deepening cooperation" between Australia and the United States under the ANZUS partnership, in an effort to foster a "resilient and inclusive" Indo-Pacific. "For over 70 years, ANZUS has been a powerful demonstration that neither the US or Australia stand alone. In the evolving strategic environment, the strength of this enduring partnership is more important than ever," Deputy Prime Minister Marles said. "I am ambitious about what Australia and the United States can achieve together and look forward to bringing new energy to the table. It is critical that we work together with our allies and partners to protect the rules-based international order." Advancing the AUKUS agreement is expected to form a key part of these discussions, particularly the current exploration of a nuclear-powered submarine capability for the Royal Australian Navy's next-generation fleet. However, ahead of his departure to the United States, Deputy Prime Minister Marles told the **Herald Sun** that other key technologies promised under AUKUS may play a more decisive role in shoring up Australia's national security over the longer-term. "These other technologies that we are looking at developing may well end up being ... just as if not more important in terms of the way in which the three countries relate to each other, and therefore what AUKUS ultimately delivers," Minister Marles said. In April, an AUKUS leaders' statement confirmed the trilateral security partnership would include cooperation on hypersonics and counter-hypersonics weapons systems. This was in addition to other previously announced capabilities, which include:

- undersea capabilities such as the AUKUS Undersea Robotics Autonomous Systems Project;
- quantum technologies including the AUKUS Quantum Arrangement (AQuA);
- artificial intelligence and autonomy aimed at enhancing AI decision-making processes and to defend against other AI threats;
- advanced cyber capabilities, including enhanced protection of communications and operating systems;
- electronic warfare, where the three partners will share "tools, techniques and technology";
- innovation, including learning from each country's defence innovation enterprises; and
- information sharing.

China tables list of demands

Deputy Prime Minister Marles' trip to the United States comes amid renewed focus on Canberra's diplomatic relationship with Beijing. Chinese Foreign Minister Wang Yi recently blamed the former Morrison government for a breakdown in relations. "The root cause of the difficulties in bilateral relations over the past few years was the former Australian government's insisting on regarding China as a rival or even a threat, allowing its words and deeds to be irresponsible against China," he told the Chinese state media outlet **Xinhua**. The accusation was accompanied by a list of four demands from Beijing, which according to Wang includes:

- treating China "as a partner, not an adversary";
- seeking common ground while "reserving differences";

- “not targeting or seeking to control third parties”; and
- building a “positive and pragmatic foundation of public opinion”.

But Prime Minister Anthony Albanese stressed Australia would not seek to repair diplomatic relations through subservience. “Australia doesn't respond to demands. We respond to our own national interest,” he said. “I'll say this. We will cooperate with China where we can. “I want to build good relations with all countries. But we will stand up for Australia's interests when we must.”

Source: <https://www.defenceconnect.com.au>

Navy demos new mine countermeasure prototype on MQ-8C Fire Scout

Published: Jul 7, 2022

NAVAL AIR SYSTEMS COMMAND, Patuxent River, Md.



MQ-8C Fire Scout demonstrates a new mine countermeasure (MCM) prototype technology in May 2022 at Eglin Air Force Base, Florida, proving a capability that could allow the warfighter to rapidly detect and respond to threats. (U.S. Navy photo)

The Navy recently demonstrated a mine countermeasure (MCM) prototype technology aboard the MQ-8C Fire Scout UAS at Eglin Air Force Base, Florida, proving a capability that could allow the warfighter to rapidly detect and respond to threats.

The objective of the demonstration was to gather performance data for both the MQ-8C Fire Scout and Single-system Multi-mission Airborne Mine Detection (SMAMD) System to inform future MCM integration efforts. “*The team successfully demonstrated that the prototype SMAMD System effectively operates as designed aboard the MQ-8C Fire Scout unmanned helicopter in relevant real-world environments,*” said Capt. Thomas Lansley, Fire Scout program director. “*This cutting-edge technology could really enhance Fire Scout's capability going forward.*” The team conducted operations from the Naval Surface Warfare Center (NSWC) utilizing drifting, tethered, and moored mines throughout the beach zone to deep waters. They gathered data day and night, across all water depths and in mild to difficult weather conditions. The demonstration also proved the reliable and repeatable high performance of the MQ-8C Fire Scout. The air vehicle handled the dual-podded system with ease, being the first MCM capability flown on the MQ-8C as well as the heaviest payload carried to date. Fire Scout successfully operated in restricted and unrestricted air space alongside other aircraft platforms. The SMAMD System, developed by BAE Systems under a Future Naval Capability (FNC) Program sponsored by the Office of Naval Research (ONR), is an airborne optical sensor suite that, in a single pass, detects and localizes mines and obstacles on land and at sea. With a low false-alarm rate, SMAMD provides real-time detection sent via data link enabling warfighters to respond much quicker to threats than the current MCM technologies allow as post-mission analysis is required. This effort, led by ONR, included support from multiple organizations across the Navy and industry including the MQ-8 Fire Scout program office, the Program Executive Office Unmanned and Small Combatants (PEO USC), Naval Air Warfare Center Aircraft Division (NAWCAD), Aircraft Prototype Systems Division (APSD), Webster Outlying Field (WOLF), the Digital Analytics Infrastructure and Technology Advancement Group Prototyping, Instrumentation and Experimentation Department, and Air Test and Evaluation

Squadron Two Four (UX-24). ONR and PMA-266 engaged NAWCAD AIRWorks to manage the demonstration taking advantage of AIRWorks' project execution expertise and ability to connect warfare centre resources. "The AIRWorks SMAMD Team was proud to be a part of demonstrating a future naval capability which provides real-time threat detection to the warfighter," said AIRWorks' project lead Kristina Hewitt-Thompson. "Through this effort, we were able to assist in risk reduction and provide critical data for future integration." Throughout the project, the team facilitated the execution of a complex demonstration including airworthiness and cyber certifications, design, fabrication and hardware integration along with flying qualities testing before the final demonstration at Eglin, she said. They assured close coordination between the U.S. Air Force, ONR, NAVAIR, NAVSEA and other stakeholder organizations to successfully achieve their objectives in less than 24 months and at a reduced cost. AIRWorks is NAWCAD's office focused on rapidly and effectively delivering fast, affordable, quality solutions to meet immediate and emergent warfighter needs working with government and industry partners to deliver services including aircraft modification, prototyping, additive manufacturing, system integration, sustainment, Intelligence, Surveillance, Reconnaissance and rapid contracting.

Source: <https://www.navair.navy.mil>

Qatar receives 2nd OPV from Italy, new landing craft from Turkey

By [Defense Brief Editorial](#)

July 7, 2022



Italian shipbuilder Fincantieri has delivered the second of two Musherib-class offshore patrol vessels to the Qatar Emiri Navy.

The vessel is named **Sheraouh** and was delivered six months after the hand-over of the first ship in January this year. Qatar bought the two ships as part of a wider [4 billion euro contract](#) signed in 2016 that envisions the delivery of a total of seven ships. In addition to the OPVs, Fincantieri is delivering four Al-Zubarah-class corvettes by 2023, as well

as a landing platform dock ship that is expected to be similar in design to the Italian Navy's San Giorgio-class amphibious transport dock. The OPVs are about 63 meters long, 9.2 meters wide, and have a maximum speed of 30 knots with a crew of 38. The propulsion systems have four variable pitch propellers, two to starboard and two to the left, each in line with a diesel propulsion engine. Furthermore, the vessels will be capable of operating an RHIB (rigid hull inflatable boat) through a crane located at the stern. In addition to a 76mm main gun, the OPVs will feature 8-cell VLS cells for the employment of surface-to-air missiles, while anti-ship capability will be provided by Exocet anti-ship missiles.

Delivery of new landing craft fleet in Turkey

In a separate ceremony on July 6, Qatar received four landing craft from the Anadolu Shipyard in Tuzla, Turkey. The Al-Ebrar Project ships, named Fuwarit, Broog, Ishat and Al-Aaleya, were delivered within 22 months from the contract signing. According to the shipbuilder, they will be sent to Qatar after six weeks of tactical shakedown training. Anadolu Shipyard also completed the delivery of two armed cadet training ships to Qatar [earlier this year](#).



Photo: Qatar defence ministry

Source: <https://defbrief.com>

Taiwan's First Indigenous LPD Starts Sea Trials



Taiwan's naval shipbuilder China Shipbuilding Corporation (CSBC) started the official sea trials of the country's first-ever indigenous landing platform dock (LPD) named "**Yu Shan**" (玉山 named after the tallest mountain in Taiwan) on July 6, 2022. **Yu Shan (LPD-1401)** was launched in April 2021, and the company achieved to make the vessel ready for sea trials after a

year of work. The 10,000 tons amphibious vessel was set to be delivered to the Republic of China Navy (ROC or Taiwan Navy) in April 2022. According to CSBC, the new Landing Platform Dock (LPD) is an important naval shipbuilding project, and is part of the government's policy of "*national shipbuilding*." The ship has a total length of 153 meters, an overall beam of 23 meters, a hull draught of 6 meters and a full-load displacement of 10,600 tons. The main task of the vessel will be amphibious operations: Serve as the main unit in an amphibious task force to carry out amphibious combat missions or perform recovery operations on Taiwan's outer (offshore) islands, and serve as a maritime mobile field hospital. Secondary roles include disaster relief (the vessel can serve as a temporary field hospital) and international humanitarian relief. The LPD can carry AAV-7 amphibious assault vehicles, landing craft, Hummer vehicles and 673 soldiers. The ship will also be equipped with seven or six fast artillery pieces, a Square Array Rapid Artillery and two Sea Sword missiles for self-defence. The new LPD will be armed with TC-2N medium-range air defence system, 76mm gun, and two Phalanx CIWS. CSBC will build four LPDs for the ROC Navy. After entering service, Yu Shan will replace the ROC Navy's only operating amphibious transport dock, the ROCS Hsu Hai (ex-USS Pensacola), which the Taiwan Navy has operated for more than 50 years. **Source : Naval News**

World's longest nuclear submarine handed over to the Russian Navy

By Thomas Nilsen

The "Belgorod" special purpose submarine, carrier of the so-called doomsday Poseidon drones, will be in experimental operation with the Northern Fleet before later to serve in the Pacific Fleet.

An official press statement posted by the Sevmasb submarine yard on Friday says the "**Belgorod**" (K-239) is a "*research submarine*". In fact, the vessel is built to carry one of the craziest weapons of mass destruction mankind ever has seen: The Poseidon, an autonomous, nuclear-powered underwater drone that can deliver its nuclear payloads from deep under, at distances like crossing the Atlantic or Pacific

Oceans. Commander-in-Chief of the Russian Navy, Admiral Nikolai Evmenov, said: "This is a significant day for us" as "... advanced achievements of science and the latest construction technologies were applied." "The submarine "**Belgorod**" opens up new opportunities for Russia in conducting various studies, allows conducting diverse scientific expeditions and rescue operations in the most remote areas of the World Ocean," the Admiral stated. Highlighting the research- and scientific work that now can be conducted by the Russian Navy in the world oceans, the statement also adds that the submarine can be used for search- and rescue operations in deep waters as it carries autonomous unmanned underwater vehicles.

Nothing in the statement mentions the Poseidon drone weapon purpose.

With the U.S. developing an anti-ballistic missile defence system, Russia started to develop a deep-diving response capability. The Poseidon is a 24-meter-long torpedo-shaped vehicle with an estimated range of 10,000 km and can travel at speeds of 100 knots down to a maximum depth of 1,000 meters. It is powered by a small nuclear reactor and could be armed with a megaton nuclear warhead. The submarine is likely to carry six Poseidon drones. The submarine also serves as a mother vessel for a deep-diving midget nuclear-powered submarine, like the infamous Losharik, a mini-submarine that got the world's attention in July 2019 when its batteries caught fire and all 14 officers on board died. The "**Belgorod**" is built on a prolonged hull of what was originally meant to be an Oscar-II class multi-purpose submarine, a sister vessel to the ill-fated "**Kursk**" submarine that sank in the Barents Sea during a naval exercise in August 2000. The hull of the submarine was laid down in 1992, but it was first twenty years later, in 2012, that the Defense Ministry decided to use the hull to construct this giant special purpose vessel. With a hull prolonged by 29 meters to 184-meters, the one-of-a-kind vessel is longer than the world's largest submarine, the Soviet-built Typhoon class. The "**Belgorod**" was launched in April 2019 and sea trials started in the White Sea last summer. "**Belgorod**" sailing out from the Sevmash shipyard in Severodvinsk in late June 2021 for the first sea trials in the White Sea. No public statement is made on where "**Belgorod**" will be based for the period it will be in experimental operation with the Northern Fleet; Severodvinsk where the Poseidon drone development is headed, or at the Olenya Bay on the Kola Peninsula where the other special-purpose submarines of GUGI, Russia's Main Directorate for Deep Sea Research, are based.

Source : BarentsObserver

Navy fires submarine *Scranton*'s commanding officer

By Geoff Ziezulewicz

The commanding officer of the fast-attack submarine **Scranton** was fired Wednesday, after eight months on the job, for reasons the Navy has not disclosed. In a brief statement Friday, the Navy said Cmdr. Seth Rumler was relieved "due to loss of confidence in his ability to command." Asked in an email whether Rumler was relieved following a Navy investigation or other probe, Submarine Force Pacific spokeswoman Lt. Cmdr. Amelia Umayam did not answer the question and instead rephrased the initial statement announcing Rumler's relief. "Triad leaders are entrusted with responsibilities essential to their Sailors and their units," Umayam wrote in response to Navy Times' questions. "They are expected to maintain the Navy's highest standards for performance and provide superb leadership to the crew." Rumler's name has been removed from the 32-year-old sub's command website, but a SUBPAC tweet indicates he took command of the boat in November.

Source : Navy Times

Third American sub visits Faslane in space of two weeks

By [George Allison](#)

July 12, 2022

With the arrival of an unknown Virginia class submarine this morning, three American submarines have now visited Faslane since the start of July.



While visits themselves are common, this frequency of visits is not common. Neither is it common for visits to be publicised by the U.S. Navy or Royal Navy unlike the visit of the **USS Rhode Island**, a Trident-armed nuclear submarine, that arrived (and departed) earlier this month. A few days ago, the **USS Georgia** (equipped with an underwater launch system for special forces) joined the **USS Rhode Island** in visiting Faslane naval base near

Glasgow in Scotland, arriving not long after the Rhode Island had left. The **USS Georgia**, like the **USS Rhode Island**, is an Ohio-class submarine. Unlike **Rhode Island**, however, she was converted to a cruise missile submarine from a ballistic missile submarine. The U.S. Navy said that this port visit to Faslane reflects the United States' "commitment to our allies and partners in the region and complements the many exercises, training, operations, and other military cooperation activities conducted by Strategic Forces to ensure they are available and ready to safely and effectively operate around the globe at any time". The last time a U.S. Navy SSBN conducted a port visit to Faslane was when **USS Alaska (SSBN 732)** visited in July 2019. "This port visit strengthens the U.S./U.K. cooperation and **Rhode Island's** forward presence demonstrates our capability, flexibility, and continued commitment to NATO allies."

Source: <https://ukdefencejournal.org.uk>

US Navy's destroyer USS Arleigh Burke visits Latvia amid Ukraine war

[Naval News July 2022 Navy Forces Maritime Defense Industry](#)

Posted On Tuesday, 12 July 2022 14:04

According to information published by the U.S. Navy on July 9, 2022, the Arleigh Burke-class guided-missile destroyer **USS Arleigh Burke (DDG 51)** arrived in Riga, Latvia for a scheduled port visit.



The destroyer **USS Arleigh Burke** in Riga, Latvia. (Picture source: U.S. DoD)

Arleigh Burke is on its second patrol in U.S. Naval Forces Europe's area of operations, working with NATO allies and partners in the region. **Arleigh Burke** began its current patrol in June, operating in the Atlantic Ocean and the Mediterranean Sea alongside allies

and partners. The ship conducted port calls in Ferrol, Spain, and Villefranche-Sur-Mer, France, strengthening ties with Spanish and French navies. Additionally, **Arleigh Burke** conducted interoperability exercises with the French and Spanish navies in the Atlantic and Mediterranean, highlighting the capability and capacity Forward Deployed Naval Forces-Europe (FDNF-E) ships bring to the European theatre. Now in the Baltic Sea, **Arleigh Burke** continues its mission for diplomatic strengthening between NATO alliances. These mobile, multi-mission capable ships routinely

operate throughout the waters of Europe and Africa, from the Cape of Good Hope to the Arctic Circle, demonstrating their mastery of the maritime domain. **Arleigh Burke** is one of five U.S. Navy destroyers based at Naval Station Rota, Spain, and assigned to Commander Task Force 65 in support of NATO's Integrated Air Missile Defense architecture.

About the destroyer USS Arleigh Burke

USS Arleigh Burke (DDG-51), named for Admiral Arleigh A. Burke, USN (1901–1996), is the lead ship of the Arleigh Burke-class guided-missile destroyers. She was laid down by the Bath Iron Works company at Bath, Maine, on 6 December 1988, launched on 16 September 1989, and commissioned on 4 July 1991. The destroyer has a length of 505 ft (154 m), a beam of 59 ft (18 m), and a draft of 31 ft (9.4 m). She can reach a top speed of 29 knots (56 km/h; 35 mph). Guided-missile destroyers are multi-mission surface combatants capable of conducting Anti-Air Warfare (AAW), Anti-Submarine Warfare (ASW), and Anti-Surface Warfare (ASuW). The destroyer's armament has greatly expanded the role of the ship in strike warfare utilizing the MK-41 Vertical Launching System (VLS), and, beginning with ships equipped with Aegis Baseline 9, Ballistic Missile Defense (BMD).

Source: <https://www.navyrecognition.com>

Can Australia get nuclear-powered submarines this decade?

22 Jun 2022

[Marcus Hellyer](#) and [Andrew Nicholls](#)



Image: [Department of Defence](#).

In 2009, Kevin Rudd's government decided to increase Australia's submarine capability. It wrote in its [defence white paper](#): 'The Government will increase the size of the submarine force from six to 12 boats. The doubling in size of the submarine fleet recognises that Australia will face a more challenging maritime environment in the decades ahead.' The goal was to start getting new boats by

around 2025. While the precise numbers, the preferred design and the timelines have changed over the past 13 years, no Australian government has walked back from the basic assessment that we need more submarine capability. But even though subsequent [strategic assessments](#) have emphasised that our 'more challenging maritime environment' is becoming more dangerous even more rapidly than we had expected, we're still no closer to having more submarine capability. When the previous government announced in September 2021 that Australia would acquire nuclear-powered submarines (SSNs), it said it expected the first ones to be delivered in the late 2030s. Richard Marles, the minister for defence in the new government, [has said](#) the mid-2040s is more likely. Throughout that long period, Australia's submarine capability will continue to comprise two deployable Collins-class submarines—the same capability we had back in 2009 when the long, meandering journey first started. It's like saying on the eve of the First World War that you need more military power and not getting anything until after the Second. We need to investigate every possible option to get more submarine capability sooner. This brings us to the recent comments of Peter Dutton, former defence minister and current leader of the opposition. Despite being a member of the government that

said we could expect the first SSNs in the late 2030s, Dutton [now says](#) he had a 'plan' to acquire two US Virginia-class SSNs off an existing American production line by the end of this decade. A further eight boats would be built in Australia. It's not really a plan, since nobody involved in delivering it, least of all the US government, has signed up for it. So it's an idea or a concept. But is it a good concept? At one level, we would say it is because it's virtually the same as one we discussed last year in [our detailed study](#) of the issues that the government needs to address in order to establish an SSN capability. We considered four build strategies. The third we termed '*kickstarted continuous build*'. Under that approach, the first SSN would be built wholly overseas, the second would be partially built overseas but integrated in Australia, and eight boats would be built here. We noted that Australia could aim for 2030 for the first boat, with the second in the mid-to-late 2030s. There were two key challenges. The first was that the US Navy would have to provide us with one of its own boats. The second was that it '*would require ... rapid development of the enabling systems to support the operation of the boat once it's delivered*' and '*an early ramp-up of the uniformed workforce*'. Let's look at how that gels with the USN's own plans. Congress requires the navy to publish its [shipbuilding plan](#) every year. Over the past several administrations, the goal has been to increase the number of SSNs. That's because submarines are one of few assets the USN has that can avoid the Chinese military's anti-access capabilities such as anti-ship ballistic missiles. The precise target number has varied, but it's consistently been around 60 to 72 by the middle of the century. In the shorter term, however, the USN is experiencing a submarine capability crunch. **First**, this decade the number of boats falls below 50, to as few as 46 in 2028, and it doesn't get back to 50 until 2032. That's because the older Los Angeles-class SSNs are retiring as their nuclear fuel runs out. The Los Angeles boats were delivered at around three per year and consequently are retiring at a similar rate. But for over a decade the USN was acquiring only one new Virginia-class boat per year. Now, after significant investment to improve the US's industrial base, they are being delivered at two per year. But the USN is still playing catch-up. **Second**, the capability shortfall is exacerbated by the planned retirement in the next few years of the USN's four SSGNs, former ballistic missile submarines that have been converted to carry 154 Tomahawk missiles each. To compensate for the missile launch cells that are going out of service, the latest batch of Virginias, the Block V variant, has a hull-lengthening '*plug*' inserted that will increase their number of Tomahawks from 12 to 40. But since they also need to account for the 12 Tomahawks on each of the retiring Los Angeles boats, they won't completely compensate for the SSGNs. There's been discussion in the US about expanding its industrial base to produce more SSNs. That's not straightforward. The USN has stated it would take investments of [US\\$1.5–2 billion](#) to do that and require an increased workforce. The USN's shipbuilding plan is already facing [affordability pressures](#). Moreover, the USN has also started construction on a new class of ballistic missile submarines (SSBNs), which are its highest priority, and the [competition for resources](#) is causing delays to the Virginias. There have been suggestions that Australia could help pay to set up a third production line. But even if we made those investments today, they wouldn't produce any additional boats this decade. It's currently taking US yards [seven or eight years](#) to build an SSN (even before we factor in the delays in the production of Block V boats). The last boats scheduled for delivery in the 2020s—the boats in the Hellyer–Nicholls/Dutton concept—have in fact already started construction. So even if we helped invest in developing more construction capacity in the US, it would likely be close to the mid-2030s by the time they could deliver any additional boats beyond those currently planned by the USN. In short, for Australia to

get any US SSNs this decade, the USN would have to give up some of the boats baked into its own plans at a time when it needs every single one it can get to stop any further decline in boat or missile numbers. That's before we get to the second challenge: the rapid ramp-up of the enabling systems. As we and others have written, there are many other elements to an SSN capability than the boats. Vice Admiral Jonathan Mead, the head of the nuclear submarine task force, [has emphasised](#) that Australia will need to demonstrate that it can exercise 'responsible stewardship' of the nuclear technologies. This will require a larger uniformed workforce, which will require substantially [different](#) qualifications. A Collins-class submarine has one engineer-qualified officer; all 15 officers on a Virginia are nuclear-qualified. It will also require the maintenance infrastructure as well as the [safety and regulatory ecosystems](#). That [takes time](#). Does that mean we have no hope of accelerating an SSN capability? We'll look at what can be done in the next post.

Author: Andrew Nicholls is a former director in KPMG Australia's Finance Strategy and Performance Division and has held senior positions in the Department of Defence and has been an adviser and senior adviser to three defence ministers on budgetary and capability matters. **Marcus Hellyer** is ASPI's senior analyst for defence economics and capability; he is on Twitter at [@Marcus_ASPI](#).

Source: <https://www.aspistrategist.org.au>

New satellite-based technologies a game changer for Indo-Pacific maritime security

13 Jul 2022

[David Brewster](#)



Image: [Department of Defence](#).

A revolution is now happening in maritime domain awareness that will have a profound impact on maritime security in the Indo-Pacific. The [Quad's Indo-Pacific Partnership for Maritime Domain Awareness](#) announced at the leaders' summit in Tokyo in May, will combine new satellite-based technologies with existing systems to help identify illicit maritime actors. This and similar initiatives will be provided with a significant boost to the ability of many Indo-Pacific countries, especially small island states, to govern their waters. Maritime domain awareness involves gaining situational awareness of the maritime environment, especially through an understanding of the position and intention of actors in a given maritime space. It is fundamental to understanding what's out there, what it's doing and what should be done about it. But achieving maritime domain awareness involves overcoming major challenges in combining data from multiple sources into a single common operating picture that can be analysed and acted on. Over the past couple of decades, technological advances have allowed data from multiple sources such as coastal radars, ships, aircraft and satellites to be pooled and analysed on a single platform, in close to real-time. This often involves sophisticated and expensive sensors and computing technology, making it accessible only to large or wealthy countries. The necessary resources and technologies are often out of reach for many countries, effectively leaving much of

our oceans as ungoverned spaces for illicit or other bad actors. Recent years have also brought a proliferation of regional information fusion centres that pool data and analysis at a regional level. This can make considerable sense for many countries, but it can also come with its own sensitivities, including for smaller countries that aspire to exercise sovereignty over their own maritime jurisdictions. Regional maritime law enforcement agencies can also directly access several web-based information platforms. The SeaVision system, for example, provided by the US Department of Transport, is used in more than 100 countries. All of these systems rely heavily on automatic identification systems, or AISs, which are transmitters required to be installed on most commercial vessels. That's good for keeping track of legitimate or 'white' shipping but is less useful in identifying vessels engaged in illicit activities. Illegal fishers, drug smugglers and other bad actors can go 'dark' by switching off or hacking their AIS systems so they can't be tracked. This big gap in maritime governance is being plugged. Under the Quad's initiative, an enhanced version of the SeaVision platform will be offered to Indo-Pacific partners, allowing them to identify and track dark shipping. This includes radio frequency data from the commercial [Hawkeye 360](#) satellite system that picks up electronic emissions (such as radar, radio and satellite phone signals) from vessels under its path. The SeaVision system compares that data with AIS data to identify vessels that have switched off or spoofed their AIS systems. Dark shipping can then be targeted for further investigation using other data sources. Other satellite-based data is being progressively added to SeaVision to help identify the types and activities of dark vessels. This includes electro-optical imagery or synthetic aperture radar data, which can be used to build a 3-D picture of targeted vessels—helping authorities identify, say, a drug smuggling dhow or a mothership. Data from the Visible Infrared Imaging Radiometer Suite, a scanning radar that detects reflected light, can help identify illegal fishers, which commonly use bright lights to attract fish at night. Some data, particularly from commercial sources, is expensive, but prices will likely fall as providers and users proliferate. Time lags in the acquisition and dissemination of satellite-based data (which may be 12 hours or more) will also likely be reduced to give end users a closer real-time picture. The US Coast Guard is offering an enhanced SeaVision product to five Southeast Asian partners in the first phase of the Quad initiative, although the cost of commercially sourced satellite data currently constrains the broader rollout of the system. Competing platforms are offered across the Indo-Pacific by other players, including the EU's [IORIS system](#), the UK's SOLARTA system and the not-for-profit [Skylight system](#). These tools can provide specific options or features. For example, the IORIS system allows users to share data bilaterally with others rather than through a common platform. The Skylight system focuses on using artificial intelligence to analyse vessel behaviour such as 'dark rendezvous events'. Together, these enhanced web-based systems will be a game changer for many Indo-Pacific island states and others that struggle to police huge maritime jurisdictions with few resources. Giving them direct access to satellite-based data with AI analysis effectively democratizes maritime domain awareness for many users, reducing their information reliance on large countries or regional fusion centres. While information is a fundamental requirement in the maritime domain, national enforcement agencies will also require the ability to take action against illicit actors, whether by interdicting them at sea or by conducting close surveillance that allows vessels to be specifically identified for others to interdict, prosecute or make their activities public. The Quad initiative, once fully rolled out, will be a major tangible demonstration of the value of the Quad in providing public goods for the Indo-Pacific—in stark contrast to China's lack of interest in helping others to police their

waters. But information by itself is not enough. It must be complemented with cost-effective capabilities such as vessels and drones that allow smaller Indo-Pacific states to take action against illicit or nefarious actors in the maritime domain. This should include expanding Australia's successful Pacific maritime security program to additional users and platforms.

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