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Poppy Day – lest we forget.

£100m investment for maritime electronic warfare capabilities

£100-million contract awarded to Babcock, Elbit Systems UK and QinetiQ to upgrade maritime electronic warfare technology.

From: Ministry of Defence
Published 9 November 2021

Defence Equipment and Support (DE&S) have awarded a £100-million contract to a Babcock-led partnership with Elbit Systems UK and QinetiQ to deliver cutting-edge electronic warfare (EW) systems to the Royal Navy. The EW technology will allow more simultaneous detection and identification of radio signals over a greater frequency range than current capabilities. This will aid faster operational decision-making, enhanced situational awareness and anti-ship missile defence capability. Around 170 jobs are expected to be created and sustained across the UK by the 13-year contract, mainly in the South West of England, ranging from manufacturing to software development roles. Defence Secretary of State Ben Wallace said: "*In a world of rapidly evolving threats, these enhancements will upgrade the Royal Navy with pioneering radar detection capabilities maintaining the UK's operational advantage at sea. "The £100-million investment with key industry partners will underpin vital defence outputs whilst supporting jobs and investment in the South-West of England*."

This is the first phase of a £500-million Maritime Electronics Warfare Programme (MEWP) to deliver battle-winning operational advantage on Type 45, 26 and 31 frigates, as well as the Queen Elizabeth class aircraft carriers. Senior Responsible Owner for the programme, Royal Navy Commodore Steve Prest, said: "*The ability to understand and exploit the increasingly complex electro-magnetic environment is critical for the operational success of the Royal Navy. "This technology will deliver a generational leap in our electronic warfare capabilities to ensure we maintain the operational advantage we need well into the 21st century*."

Rear Admiral Jim Higham, DE&S Director Ship Support, said: "*I am delighted to have achieved contract award and look forward to working with Babcock, Elbit and QinetiQ. Now the real work begins - delivering this crucial capability to the frontline to time and cost and supporting the men and women of the Royal Navy in what they deliver for our nation*."

Babcock, Elbit and QinetiQ will work as one team with DE&S, the Navy and Dstl (Defence Science and Technology Laboratories) to design, manufacture, deliver and integrate the capability before providing in-service support for the duration of the contract. Strengthening maritime capabilities ensures the Royal Navy are spearheading innovation and are prepared for new and emerging threats. This ambition, outlined in the Defence Command Paper, is reinforced by the £24 billion increase in defence spending over the next four years.

Source: https://www.gov.uk

S. Korea to launch new frigate named after warship torpedoed by N. Korea in 2010

By Yonhap
Published : Nov 9, 2021 - 11:19 Updated : Nov 9, 2021 - 11:19

South Korea was set Tuesday to hold a ceremony launching a new frigate named after a warship torpedoed by North Korea in 2010, the Navy and state arms procurement agency said. The ceremony for the 2,800-ton frigate, ***Cheonan***, was scheduled to take place at the shipyard of Hyundai Heavy Industries Co. in Ulsan, some 410 kilometers southeast of Seoul, as the Navy still has potent memories of the North's deadly attack. The 1,200-ton corvette ***Cheonan*** sank near the Northern Limit Line, a de facto western inter-Korean sea border, in March 2010, after a North Korean midget submarine fired a torpedo at it, killing 46 sailors. The unveiling of the ***Cheonan*** carried a symbolic meaning for the survivors of the attack and bereaved families who have wished to see the new warship named after the ill-fated

corvette and commissioned to fulfil its unfinished mission of safeguarding the maritime border.

This photo, released on Tuesday by the Navy, shows the new 2,800-ton frigate ***Gyeongnam*** in operation. The warship is the second vessel built under South Korea's frigate acquistion program called FFX-Batch II. (The Navy)

Some 100 people, including Defense Minister Suh Wook and Chief of Naval Operations Adm. Boo Suk-jong, were set to join the event to transfer the frigate onto the water for the first time. Striking a sour note, Choi Won-il, the captain of the corvette at the time of the sinking, said he would not attend the event in protest over the state-run communications standards panel's recent decision not to take issue with social media video clips raising conspiracy theories behind the cause of the sinking. The frigate, ***Cheonan***, is the seventh Daegu-class warship produced as part of South Korea's frigate acquisition program, code-named FFX Batch-II. The Navy seeks to procure eight vessels in total under the program designed to replace the aging fleet of 1,500-ton frigates and 1,000-ton corvettes. The new vessel is equipped with a 20-mm Phalanx close-in weapon system, anti-ship and ship-to-ground guided missiles, and underwater missiles, as well as hull mounted and towed array sonar systems. "*The frigate is the latest vessel equipped with sturdy, home-grown weapons systems, and we expect it to safeguard the West Sea by honouring the noble sacrifices of the sailors and inheriting their will for national defense*," an official at the Defense Acquisition Program Administration said. The ***Cheonan*** is expected to be delivered to the Navy in 2023 and put into service the following year, a Navy official said. In March, President Moon Jae-in made public a decision to christen the new frigate the ***Cheonan*** during an annual event marking the West Sea Defense Day commemorating Navy sailors' contributions to maritime security. (Yonhap) **Source: http://www.koreaherald.com**

Keel laid for Pakistan Navy's final Milgem-class corvette

November 5, 2021,
by Fatima Bahtić

The Pakistan Navy has held a keel laying ceremony for its fourth Milgem-class corvette at Karachi Shipyard & Engineering Works Limited (KS&EW).

In July 2018, Pakistan Navy signed an agreement with Turkish firm ASFAT for the acquisition of four MILGEM-class ships. Under the contract, two ships were to be constructed at Istanbul Naval Shipyard and the other two at Karachi Shipyard and Engineering Works. The Milgem-class corvettes for Pakistan are based on the Ada-class corvettes built for the Turkish Navy under the Milgem project which includes the construction of both corvettes and frigates. The units feature a length of 99 metres, a displacement of 2,400 tonnes and can reach a speed of 29 nautical miles. They are equipped with advanced surface, sub-surface and anti-air weapons and sensors, integrated through an advanced network-centric combat management system. In June this year, Karachi Shipyard and Engineering Works held the steel cutting ceremony of the fourth Milgem-class corvette.

Source: https://www.navaltoday.com

China Builds Mockup of U.S. Navy Aircraft Carrier, Destroyers at Missile Target Range

By Yew Lun Tian Reuters
November 8, 2021

A satellite picture shows a mobile target in Ruoqiang, Xinjiang, China, October 20, 2021. Satellite Image ©2021 Maxar Technologies/Handout via REUTERS.

BEIJING, Nov 8 (Reuters) – China's military has built mock-ups in the shape of a U.S. Navy aircraft carrier and other U.S. warships, possibly as training targets, in the desert of Xinjiang, satellite images by Maxar showed on Sunday. These mock-ups reflect China's efforts to build up anti-carrier capabilities, specifically against the U.S. Navy, as tensions remain high with Washington over Taiwan and the South China Sea. The satellite images showed a full-scale outline of a U.S. carrier and at least two Arleigh Burke-class guided missile destroyers had been built at what appears to be a new target range complex in the Taklamakan Desert. The images also showed a 6-meter-wide rail system with a ship-sized target mounted on it, which experts say could be used to simulate a moving vessel. The complex has been used for ballistic missile testing, the U.S. Naval Institute reported, quoting geospatial intelligence company All Source Analysis. For a graphic, click here. China's anti-ship missile programs are overseen by the People's Liberation Army Rocket Force (PLARF). China's defense ministry did not immediately respond to a request for comment. According to the Pentagon's latest annual report on China's military, the PLARF conducted its first confirmed live-fire launch into the South China Sea in July 2020, firing six DF-21 anti-ship ballistic missiles into the waters north of the Spratly Islands, where China has territorial disputes with Taiwan and four Southeast Asian countries. The tests at sea may have shown China "*they are still far from creating an accurate ASBM*," said Collin Koh, a research fellow at the S. Rajaratnam School of International Studies in Singapore. "*I don't think the desert targets are going to be the final stage. It's meant for further refinement*." An anti-ship ballistic missile test in the desert would not reflect the realistic conditions of a marine environment, which could affect sensors and targeting, but would allow China to carry out the tests more securely, Koh said. "*The best way to test it and keep it out of the prying eyes of the U.S. military and intelligence assets is to do it inland*," he said. Neighboring countries, concerned about the missiles hitting other ships around the target, might also object to China's testing at sea, he added. U.S. Secretary of State Antony Blinken said in July this year that the United States will defend the Philippines if it comes under attack in the South China Sea and warned China to cease its "*provocative behaviour*."

Source: https://gcaptain.com

Navy conducts live test of resupply drones for ashore, at-sea missions

The Navy and Marine Corps have sought unmanned resupply capabilities for years, but the acquisition process and exquisite requirements have slowed the process of bringing the technology to the fleet.

WASHINGTON: The Navy's test squadron has tested out two different unmanned aerial resupply drones, both under consideration for future acquisition programs, the service announced today.

A Navy Blue Water UAS takes off during a demonstration in Maryland on Oct. 27. **Photo: US Navy**

Tests of the Tactical Resupply UAS, also called TRV-150, and the Blue Water logistics UAS, occurred Oct. 27 in St.

Inigoes, Md. The former is under development by the UK-based Malloy Aeronautics and a Maryland-based firm called SURVICE Engineering Company. The latter is made by PteroDynamics, a California-based developer and manufacturer focused on vertical-take-off-and-landing aircraft. From the Navy's perspective, TRUAS is viewed as a likely candidate for missions ashore with the Marine Corps, given its shorter range but heavier 150-pound lift. Blue Water, as the name implies, could be used for resupply at sea where its small footprint makes it suitable to be stored onboard ships, according to a service statement. The service's Small Tactical Unmanned Aircraft Systems program office and Air Test and Evaluation Squadron (UX-24) performed multiple resupply missions with both drones, the statement continued. The missions were straightforward, with each drone being tasked to fly autonomously from one point to another, and in some cases wait for a sailor or Marine to give it further commands. "*The demonstration highlighted the basic capability of the systems to operate autonomously, to have mission plans uploaded and to execute the flights with little to no input while they were in the air*," said Cmdr. Seth Ervin, the test squadron's chief pilot.

A TRV-150 Tactical Resupply UAS flies over during a demonstration on Oct. 27. **Photo: US Navy**

"*These systems have to be transportable, so they have to come in cases and they have to be expeditionary*," Ervin continued. "*And that was really the focus of today, to walk through, in a fairly quick fashion, and show how easy it is for a basically trained Marine or sailor to get the system out of a box, to get it set up, to get it uploaded, and hit go*." The Marines plan to continue testing TRV-150 next summer, while the Navy is using Other Transaction Authorities to prototype BWUAS "*and demonstrate feasibility of autonomous tactical resupply at sea*," the statement said. **Source: Breaking Defense**

Pakistan receives new Chinese-made frigate. How will it fare against India's Navy?

The Type 054A/P Pakistan-specific variant equipped with the SR2410C long-range and Type 517/SUR17B air-surveillance radars. Photo: Pakistani Government

ISLAMABAD —
Pakistan on Monday commissioned the first of four Type 054A/P frigates during a ceremony at the Hudong Zhonghua Shipbuilding yard in Shanghai, China. Named ***Tughril***, the frigate and its sister ships are the most powerful surface vessels planned under Pakistan's naval modernization program, meant to redress a conventional imbalance with India. Pakistan's ambassador to China, Moin Ul-Haq, said in a Navy news release that the frigates will strengthen the service's ability to respond to maritime challenges, ensure seaward defense, and maintain peace, stability and the regional balance of power. Ul-Haq also praised China State Shipbuilding Corporation, China Shipbuilding Trading Company, China Ship Development and Design Center, and Hudong Zhonghua Shipbuilding, as well as the Chinese People's Liberation Army Navy for ensuring the frigate's timely delivery amid the COVID-19 pandemic. The Pakistan Navy did not respond to Defense News when asked if the remaining frigates' deliveries were on schedule. Pakistan became the ship design's first foreign customer under a 2017 deal for two Type 054A/P frigates, with two more ordered in 2018, with deliveries to begin in 2021. They are the most powerful Chinese warships exported to date. The Type 054A/P is a Pakistan-specific variant equipped with the SR2410C long-range and Type 517/SUR17B air-surveillance radars. Previous reports speculated they would be armed with a supersonic anti-ship missile and/or Pakistan's Harbah anti-ship, land-attack cruise missile. However, Richard Fisher, a senior fellow at the International Assessment and

Strategy Center, told Defense News the speculation can be put aside with the unveiling of a Pakistani ship-launched ballistic missile, dubbed P282. "*Imagery revealed during the commissioning of **Tughril** confirms that the '**P282**' is the China Aerospace Science and Industry Corporation (CASIC) CM-401 hypersonic-speed capable anti-ship ballistic missile*," Fisher said. The CM-401 is a short-range ballistic missile that can maneuver to avoid interception and can allegedly travel at Mach 6. Highlighting the flexibility of the Type 054A/P, Fisher said the Tughril is the "*first Chinese export warship to feature a 32-cell vertical launch system that can be armed with an array of anti-aircraft missiles, ship and land-attack cruise missiles and anti-submarine missiles, as they are on PLA Navy Type 054A frigates*." The Type 054A/P also carries HHQ-16 medium-range air defense missiles that provide an area defense capability. Pakistan has experienced a capability gap since its lease ran out with the United States for four American Brooke-class frigates in 1994. Pakistan's four F-22P Zulfiquar (Type 053H3-derivative) frigates are incapable of dealing with modern missile threats, but might receive upgrades with the fielding of the Type-054A/Ps. Tom Waldwyn, a naval expert at the International Institute for Strategic Studies, said the Type 054A/P ships "*will be a considerable improvement … particularly in terms of [anti-submarine warfare] capability*" over the 1970s-era ex-British Type 21 frigates that Pakistan acquired in the 1990s. The Type 21s will now undergo decommissioning. However, he added, India's navy "*maintains a significant numbers and capability advantage over Pakistan*" despite its own programs having suffered "*significant delays*" and the service's spread-out deployment among several coastal areas. Furthermore, the "*potentially more lucrative Indian market*" had lured European, Russian and American firms away from supplying Pakistan, essentially forcing Islamabad to rely on Beijing for defense equipment, he said. Though this may have hampered Pakistan's ability to acquire cutting-edge defense equipment, Waldwyn said the delivery of eight Type 039B Yuan/Hangor II-class submarines will "*enlarge the fleet and be a significant capability improvement, particularly if they are fitted with long-range cruise missiles*." Citing Pakistan's tests of the submarine-launched Harbah nuclear-capable cruise missile, he said their entry would be far more significant to the strategic balance than a handful of new frigates. **Source: Defense News**

Is the nuclear subs plan a '*pipedream*'?

11 November 2021
By: Charbel Kadib

Has Australia bitten off more than it can chew with its latest submarine procurement strategy under AUKUS?

The newly established AUKUS alliance — which promises the delivery of at least eight nuclear-powered submarines built in Australia as part of a knowledge-sharing arrangement — has largely been welcomed by the political class and stakeholders across Defence and defence industry. Supporters have touted the capability benefits of a nuclear-powered submarine fleet, as well as the long-term advantages associated with accessing cutting-edge technology developed in the US and the UK. However, some observers doubt the deal can deliver on its promises. According to Geoff Crittenden, CEO of industry group Weld Australia, the nation does not have the infrastructure, skills or experience for a timely delivery of the nuclear-powered fleet. "*There was general consensus that building the Attack Class submarines would be a challenge for Australian industry — building nuclear-powered submarines presents an inordinate number of issues*," he writes. "*The skills, knowledge and expertise required to build a submarine are akin to those required to build a space craft chartered for the moon. Building a nuclear submarine is equivalent to building a space craft set for Mars and beyond. It is an entirely new quantum*." Crittenden argues that without an existing nuclear industry, it would be difficult for industry partners to meet the local

industry content requirements included in Defence contracts. "*While ambitious, the federal government's local content requirements are of enormous benefit to Australian industry*," he notes. "*However, without exception, they have been extremely difficult to execute effectively on recent Defence projects*." The Weld Australia CEO lists a number of challenges to achieving such targets, including:

- the complexity of the project, requiring a highly skilled workforce and investments in cutting-edge technology and rapid upskilling;
- the involvement of global contractors with priorities that extend beyond Australia's borders; and
- the local industry's inability to keep up with the speed and scale of delivery expectations.

"*In some areas, and across some skillsets, there are gaps in the local industry. And this is in industries in which Australia already has proven experience—let alone nuclear power*," Crittenden continues. "*Mandating local industry content requirements is a powerful government tool that affords many benefits, but it is impossible to create industry capability and capacity overnight. "As a result, the defence prime contractors can find themselves stuck between a rock and a hard place — the balance between delivering on time and on budget, and meeting local industry content requirements becomes unworkable*." Crittenden goes on to lament the local skills shortage, claiming it is unlikely the next-generation submarines would be built in Australia, given the absence of welders in Australia certified to the standards required for nuclear-powered vessels. "*This will obviously impact local industry content requirements, as well as upskilling, technology transfer and the shipbuilding workforce in general*," he adds. Australia would also need to invest in infrastructure capable of handling nuclear reactors during both the construction and maintenance phases. "*It's highly unlikely that the people of Port Adelaide will warm to a nuclear facility located on their back doorstep. So, where is the federal government planning to situate this facility?*" Crittenden writes. He also flags crewing concerns, noting a lack of skilled nuclear engineers and captains. "*It takes years and years of experience to captain a nuclear submarine; Australia effectively needs mariners in training now to ensure they're ready to captain submarines when construction is complete*," he observes. "*Australia already struggles to crew its Collins Class submarines, which need up to 50 people aboard. The US Fast Attack submarines require crews of around 130 people. How will Australia bridge this shortfall?*" In light of these obstacles, Crittenden claims it is unlikely nuclear-powered submarines would enter service until the 2040s, by which time the technology "*could be obsolete*". Crittenden concludes by questioning whether taxpayers should bear the cost of what he describes as the federal government's "*pipedream project*". The Weld Australia CEO suggests the government may instead decide to purchase the vessels directly from the US or the UK. "*While there is no simple solution, the construction, operation and maintenance of nuclear submarines without a local nuclear industry will be challenging*," he writes. "*Industry will need to stand by for clarification from the federal government*."

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

It always amazes me how quick people can conjure up all the negatives, and how few people will make an as extensive list as to what could be done. In the past Australia has done extremely well in obtaing the required skills.

China in dark over what damaged US nuclear submarine in South China Sea: Report

The Chinese military is still in the dark over what damaged the US nuclear submarine when it was on the prowl in the disputed South China Sea early this month, while satellite photos of the moored vessel showed that the sub may have had a head-on collision, rendering it "*deaf and blind*", according to a media report on Saturday. A recent satellite image suggests that the damage to the American submarine, the **USS *Connecticut*** may have been caused by a head-on collision with a pint-sized submerged object in the South China Sea (SCS), according to Chinese military experts. The incident four weeks ago may have occurred in waters near the disputed Paracel Islands in the SCS controlled by China, indicating the Chinese Navy could have detected the American sub on its way to Guam but

was not aware of its damaged condition, the Hong Kong-based South China Morning Post reported. Earlier this month, media reports said that the US nuclear-powered submarine was damaged after it struck an object underwater in the SCS. Eleven sailors on board the ***USS Connecticut*** were injured in the accident. None of the injuries were life-threatening, an announcement by the US Pacific Fleet said. It is unclear what the Seawolf-class submarine may have hit as the US Navy's announcement of the accident days later did not give further details such as the extent of the damage, what the sub had collided with or the specific location. Reacting to the incident, Chinese Foreign Ministry spokesman Zhao Lijian told a media briefing here on October 8 that "*China is severely concerned about this accident*" and asked the Pentagon to provide an explanation. "*The US as the side involved in this incident should inform the relevant details including the location, purpose of this navigation, details of the accident and what did the submarine run into and whether any nuclear leakage has taken place and whether local maritime environment was harmed*," he had asked. After the incident, the submarine managed to travel to the US Navy's base in Guam and the first publicly available image of the moored vessel showed that the sonar dome of the Seawolf-class sub's nose had been taken out, suggesting its bow sonar system was damaged in the incident on October 2, the Post report said. The satellite photos of the submarine **USS *Connecticut*** were captured by the American private Earth imaging company Planet Labs on October 20, and published by American technology and military site The Drive. "*It's almost certain that the **USS Connecticut** was hit in a head-on collision that cracked its sonar dome, the most important sensor system, meaning the sub became effectively blind and deaf underwater and had to escape immediately*," Macau-based military observer Antony Wong Tong said. Twelve days earlier, Beijing-based maritime think tank, the South China Sea Strategic Situation Probing Initiative, posted a low-resolution satellite image on Twitter and said a suspected Seawolf-class submarine had been spotted sailing 43 nautical miles (80 kms) southeast of Paracel Island on October 3, the day after the apparent collision. Paracel Island of the SCS is called Xisha islands by China. China claims sovereignty over all of the South China Sea. Vietnam, Malaysia, the Philippines, Brunei and Taiwan have counter claims. Beijing is engaged in hotly contested territorial disputes in both the South China Sea and the East China Sea. It has built up and militarised many of the islands and reefs it controls in the region. Both areas are stated to be rich in minerals, oil and other natural resources and are also vital to global trade. The US has been periodically sending its naval and air patrols through the SCS, challenging China's claims of sovereignty over the area and also to assert the freedom of navigation. Cao Yanzhong, a researcher with the People's Liberation Army (PLA) Academy of Military Science has claimed that the US warships and planes carried out over 2,000 close spying missions aimed at China this year as rivalry between the two countries heightened. The targets of these missions included Chinese controlled islands and reefs in the SCS as well as the coastal area of the Chinese mainland, Cao told the 10th Xiangshan forum, an annual Chinese military conference recently. Wong further said that information suggested that the collision of the US submarine could have happened close to the exclusive economic zone claimed by China around the disputed islands, even if the US did not recognise such a zone when conducting freedom of navigation operations in what it says are international waters. "*The collision may have happened less than 43 nautical miles from the Paracels, and a sub-operation is much more sensitive than those of surface vessels, pushing the US Navy to keep a low profile and avoid alerting their Chinese counterparts*. "*The fact that the American sub could stay underwater for so long suggests that the damage was not serious*," Wong told the Post. The resource-rich South China Sea is the world's busiest waterway for military and commercial vessels. Beijing is building a massive underwater observation network, dubbed the "*underwater Great Wall*", for maritime science and national security applications. Beijing-based naval expert Li Jie said that the Chinese Navy may have been aware of the American sub's route through the region but did not establish where the incident occurred and just let it pass. The damage could have been caused by something the size of an underwater drone, rather than another submarine, the expert said. "*This accident reminded the People's Liberation Army Navy to further beef up China's underwater surveillance capability, as well as its defensive strength in the region*," Li added.

Source : hindustantimes

Australia already has a submarine capability gap

5 Nov 2021

Marcus Hellyer

At Senate estimates hearings on 24 March of this year, the independent Senator Malcolm Roberts bluntly asked Defence Department officials, '*If the last sub will be delivered in the 2040s and the first delivery is estimated to be in 2032–33, won't these subs be obsolete by the time they are ready for the water?*' (page 62 here). The officials answered, '*No, they won't be obsolete by the time they enter the water. We are also designing this submarine to … keep them superior throughout their service life*.' That answer was consistent with the one repeatedly delivered by ministers and officials since the Attack class was chosen in 2016, despite it being a conventional, not nuclear, design. Roberts was expressing what many were thinking—and was remarkably prescient. On Monday, Prime Minister Scott Morrison, discussing the events that led to the cancellation of the Attack class deal with France's Naval Group, said that the first submarine would have been obsolete almost the minute it got in the water. And it was '*the unanimous view of all the chiefs of our services and defence force, that this was a capability that was not going to meet our needs*'.

Image: Department of Defence.

Similarly, Defence officials had consistently denied suggestions at estimates that there were significant delays in the project by saying that the first Attack-class boat would be operational by 2034. Yet the prime minister said that '*our view [was] that this project would be further delayed and that would not see a submarine in the water until the late 2030s and possibly as late as 2038*'. What are we to make of this? How confident should we be in any of Defence's statements on other key capabilities? Will the Hunter-class frigate be a superior and survivable capability when (or if) it starts to enter service around 2033? Will the army's $40 billion investment in armoured vehicles be worth it in the face of the cheap drones and missiles that are available to any state that wants them? Can the navy avoid a submarine capability gap during the (now even longer) transition to its future submarines? Since we started by talking about submarines, we'll look at the last of those questions. **First**, a word of warning. It's important not to fall for the old street magician's trick in which he steals your watch while diverting your attention somewhere else. Don't fall for Defence's line that it can keep the Collins-class submarines going until the SSNs arrive, because that's an entirely separate issue from a capability gap. If you do, you've already lost your watch. The 2009 white paper was the first defence strategic planning document to announce that Australia would acquire a fleet of 12 submarines. This requirement was driven by Australia's changing strategic environment. Those submarines were meant to start entering service around 2025. We can argue about whether that was a realistic date, but the intent was to increase Australia's submarine capability beyond six Collins-class boats. Since 2009, no government has wavered from the intent to increase our submarine capability. Moreover, there is broad consensus that Australia's strategic circumstances have become more perilous, reinforcing that requirement. Yet the timeline for delivery of that additional capability has moved from 2025 to 2034 and now to the late 2030s. By definition, we'll have a gap because we won't have the capability that strategic assessments have repeatedly said we need. That gap already exists. The 2020 defence strategic update states that the Australian Defence Force is a largely defensive force that can't deter attacks on Australia or '*hold potential adversaries' forces at risk from a greater distance*'. Regardless of how many Collins we have, that gap will grow through the 2020s and into the 2030s as the wished-for future submarines are still not delivered. But let's play along with the magician and accept that preventing a gap is all about keeping the six Collins in working order to meet Defence's requirement, which is to

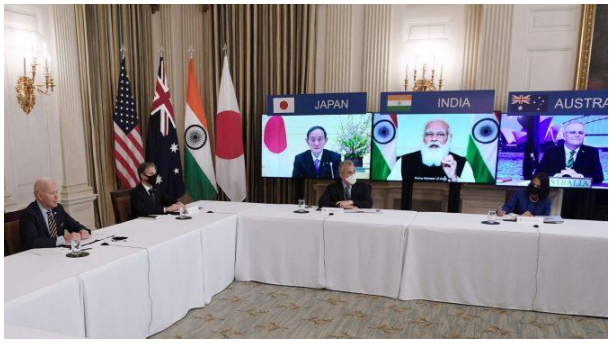
generate out of the fleet of six boats four that are available to the fleet commander of which two are deployable. Officials have indicated that the planned life-of-type extension will allow the Collins to continue to meet that requirement. But that's mistaking carts for horses. Two deployable boats are the requirement because that's all that can possibly be generated out of a fleet of six, not because two is the magic number that will keep Australia safe. So simply saying that Defence can keep six boats in service says nothing about whether we will have the capability we need. Two boats, by the way, can't sustain a presence in even one area at any distance from Australia; we'll come back to that issue in a minute. But will Defence even meet that requirement? **First**, there's the issue of whether the Collins will be a relevant capability. Here's another of those strange moments in cognitive dissonance. Defence has been telling Senate committees for years not only that the Attack class would be regionally superior, but that it would also keep the Collins class as a regionally superior capability until it was withdrawn from service (see page 49 here, for example). However, its view was also that there was no alternative to the Attack because it was the only conventional boat that could provide a regionally superior capability (page 19 here, for example). So if the Attack was going be obsolete by the 2030s, it's hard to see how any conventional submarine could be regionally superior into the 2040s, let alone one that's at least a generation older. That's before we look at the issue of whether a fleet of six ageing boats can sustain the number of sea days needed to produce the much large number of submariners Australia will need to transition to the future SSN fleet. I've referred in an earlier piece to the Canadians' fleet of four ageing submarines that couldn't achieve a single sea day in 2019, which makes the navy's goal of generating 1,400–1,600 submariners by the mid-2030s—that is, before the first new boat arrives—look pretty ambitious. So, whichever way we look at it, we will have a submarine capability gap; the only uncertainty is whether we will have less capability than we have now. What can we do about it? The **first** step is to move beyond our unhealthy fetish with finding the perfect submarine, which has achieved nothing other than getting us even further away from having any new submarines than we were in 2009 when this unhappy journey started. My colleague Michael Shoebridge has already drawn attention to what was perhaps one of the most illuminating exchanges at estimates in recent years. Liberal Senator and former general Jim Molan asked (page 24) Chief of Navy Mike Noonan whether '*the only thing that a submarine can do that other things can't do is perhaps have a significant and enduring presence?*' Noonan replied that the senator had put it well. But if the main effect that submarines can deliver that other platforms can't is presence, a fleet of six submarines can't do that well since it can't even sustain one boat on station. In the estimates hearing, ADF Chief Angus Campbell then elaborated on the need to think of capability in terms of systems of systems rather than focusing on platforms. It was an emperor's new clothes kind of moment—a statement of the obvious but unsayable. Why, then, are we so obsessed with submarines? The main challenge for Defence over the coming decades is not to deliver a fleet of SSNs. With enough time, money and help from our partners that will eventually happen. The main challenge will be ensuring that the focus on SSNs doesn't suck all the oxygen out of the room. Defence needs to make sure it devotes even more effort, funding and, most importantly, imagination to rapidly acquiring other systems that can deliver the effects it requires, including those it seeks from submarines. ASPI analysts have written often both about those kinds of systems and about more agile ways to acquire them, and I won't repeat those ideas here. But when you have an addiction, the first step to beating it is to acknowledge it. We are addicted to submarines.

Author: 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**

Jewel of the Indo-Pacific: The Quad as a Maritime Security Diamond

November 10, 2021

By LT Matt Little, U.S. Navy



Leaders of the Quad countries meet virtually in March 2021. (Olivier Douliery/AFP/Getty Images)

On August 26th, ships, aircraft, and personnel from Australia, India, Japan, and the United States commenced, for the second year in a row, a combined naval exercise to demonstrate "*cooperative planning, training, and employment of advanced warfare tactics.*"[1] The exercise, **Malabar 2021**, marks a significant step toward increased maritime cooperation between the four members of the Quadrilateral Security Dialogue, or Quad, which has emerged as a promising but unproven partnership for regional security in the Indo-Pacific. The Quad nations are united by their agreement on the importance of a free and open Indo-Pacific but have not yet defined their mutual role in the region. Lingering ambiguity surrounding the Quad's intended function breeds doubt about its potential for success and prompts dismissal by critics of the current, informal relationship.[2] Former Japanese Prime Minister Shinzo Abe first described a vision for the Quad as a "*security diamond*" meant "*to safeguard the maritime commons*" of the Indo-Pacific.[3] How might the current leaders of the Quad nations defy the critics and bring Abe's vision to fruition? Maritime security is an innately multinational interest with challenges such as unregulated fishing, smuggling, and piracy that occur in international waters and traverse borders between states.[4] The Quad, comprised of four democratic nations committed to the rule of law, is well-suited to muster a collective response to these illicit activities. The United States, for its part, would be wise to embrace such cooperation. U.S. policymakers concede that America's military advantage in the region is eroding and that allies and partners are crucial to achieving U.S. policy objectives.[5] The combined national powers of the Quad provide an opportunity to exert the military and law enforcement presence necessary to respond to security threats while actively pursuing increased cooperation with rising regional powers. The Quadrilateral Security Dialogue should focus the combined diplomatic, information, military, and economic power of its member nations to promote maritime security in the Indo-Pacific by fostering and strengthening rising partners in the region while coordinating to detect, analyze, and interdict illicit maritime activity.

Invest in ASEAN

The Quad's main line of effort in the tense Indo-Pacific region should be diplomacy, and the primary avenues of approach should be relations with the Association of Southeast Asian Nations (ASEAN). The Quad provides a vehicle for its members to engage ASEAN on common goals as one body, rather than as separate parties. ASEAN's own published "**Outlook on the Indo-Pacific**" echoes many of the Quad's priorities for the region, indicating that engagement would likely be worthwhile. The ASEAN nations aspire to play a central role in promoting maritime security by combating transnational crimes such as "*trafficking in persons or of illicit drugs, sea piracy, and armed robbery against ships" and by cooperating for "sustainable management of marine resources.*"[6] The Quad, in turn, has publicly committed to ASEAN centrality in the region and voiced support for ASEAN's "**Outlook**." Such agreement between the two multinational partnerships is a starting point for increased diplomatic efforts and consensus-building. Another diplomatic component of maritime security in which the Quad nations are highly capable is the realm of humanitarian aid and disaster relief (HADR). The Quad could expand its soft power in the region with little political resistance by incorporating HADR into its diplomatic agenda.[7] By continually promoting itself as a force for good in the region, the Quad will retain the necessary diplomatic capital to enforce maritime law and stave off allegations that its purpose is as a military alliance for great power competition. As China's presence and power in the region continue to grow it will be increasingly important for the Quad to remain an attractive, non-threatening partner for ASEAN cooperation. HADR will likely prove a key component in sustaining goodwill among both ASEAN political leaders and the people of Southeast Asia. After establishing firm diplomatic ties with ASEAN nations and other cooperative partners, the Quad should coordinate economic investments to help those partners strengthen their own maritime security efforts. Several Quad nations already have existing economic programs meant to address such security challenges. The Maritime Security Initiative of the United States, for example, is a $425 million program that provides grants to ASEAN nations for technologies such as automatic identification systems; intelligence, surveillance, and reconnaissance capabilities; data collection capacity; and secure communications.[8] The promise of the Quad is the ability to direct the economic efforts of all four nations toward a single purpose

to maximize effectiveness. By acting as one body the Quad can dedicate more resources towards providing ASEAN nations with the technologies and capabilities required to make them effective maritime security partners. In addition to assisting ASEAN nations with their maritime security capabilities, the Quad could improve economic security in the region by responding to violations of ASEAN economic exclusion zones (EEZs). For example, as signatories to the UN Fish Stocks Agreement, the Quad nations would share an interest in conducting boarding and inspection of fishing vessels to ensure compliance with international rules.[9] Enforcing the rule of law in EEZs would help ensure that ASEAN nations have the right to protect and benefit from their own natural resources. Improving their economic situation would provide ASEAN nations with more financial resources to dedicate towards maritime security initiatives.

Enforce Maritime Order

While diplomatic and economic efforts should largely be spent fostering new partnerships for the Quad, the information and military levers of power should be directed toward improving the Quad's ability to respond to current issues in the region. One of the major challenges to fostering maritime security in the vast Indo-Pacific is maintaining continuous maritime domain awareness (MDA). The individual Quad nations already possess many of the resources and doctrine required to contribute to a robust MDA picture. In the area of maritime patrol and reconnaissance aircraft, for example, all four nations field comparable assets. The United States, Australia, and India all operate the P-8 Poseidon, and while Japan chose to build the Kawasaki P-1, it shares many standard operating procedures and tactics with the United States and Australia from many years of operating the P-3 Orion.[10] The Quad's immediate focus in the information realm should be combining the MDA efforts of its assets into a shared Common Operational Picture (COP) that provides all four nations with situational awareness of maritime security concerns. The primary hurdles for the development of a shared COP are limits on information sharing. The Quad should build upon recently signed agreements such as the Communications Compatibility and Security Agreement (COMCASA) between the U.S. and India and the Trilateral Information Sharing Arrangement (TISA) between the U.S., Australia, and Japan to craft a quadrilateral agreement that allows for universal sharing of maritime intelligence.[11,12] With information sharing architecture in place, the Quad should next form a maritime intelligence fusion center where analysts from all four nations can assimilate information and coordinate military or law enforcement responses to illicit maritime activity. Ideally, this fusion center would be developed in a central, strategic location such as India's Andaman and Nicobar Command at the mouth of the Strait of Malacca.[13] In addition to instituting formal information sharing and analysis, the Quad should take several steps to improve its military response to maritime security issues. **First** should be organizing and conducting ongoing training for proficiency and interoperability, both among its own nations and alongside willing participants from ASEAN. Most of the training should focus on law enforcement and response, which would be less politically sensitive than regular drilling of warfighting tactics and would address the most common concerns in the region, such as smuggling, piracy, human trafficking, and illegal fishing.[14] The Quad could even consider involving Chinese authorities in law enforcement training as a way to foster cooperation on mutual concerns. After a period of successful training, the next step for the Quad should be to create an on-call force comprised of Quad naval and coast guard assets that would share responsibility for responding to illicit activity across the region.[15] The four nations would coordinate the placement of maritime assets across the region to minimize response time to any located threats. These assets could then respond to information gathered by the Quad maritime fusion center or reports from ASEAN nations concerning incursions of their sovereignty. By working together to detect, analyze, track, and respond to illicit maritime activity, the Quad could grow into a functional maritime security enforcement organization that would promote a rules-based order across the Indo-Pacific.

No NATO-of-the-Pacific?

More aggressive proponents of the Quad might argue that the group's maritime security efforts should not be directed solely at partner-building and maritime domain awareness but rather towards deterring China's malign actions in the region, such as the militarization of the South China Sea. But while recasting the Quad as a NATO-of-the-Pacific may seem like the

arrangement's logical strategic destiny, proceeding too quickly towards open opposition to China would inevitably break the partnership. The greatest challenge for the Quad will be keeping the strategic priorities of the four nations aligned in the face of inevitable pressure from the PRC.[16] All four Quad nations are deeply entangled with China economically and, as democracies, would face the difficult task of messaging the economic consequences resulting from a military standoff. Forcing the Quad too quickly into an anti-China alliance would likely produce political pressures leading to its demise. Additionally, the various interests of ASEAN nations align with both China and the Quad. If the Quad were solely aimed at great-power competition with a rising China, ASEAN would not support it.[17] Lacking cooperation with ASEAN, the Quad would have little influence or legitimacy in the region. The Quad's maritime security efforts should focus on politically insensitive missions that foster cooperation and interoperability and could later be scaled to meet deteriorating strategic conditions. If China continues its record of coercion and pressure in the region, the governments of Canberra, Delhi, Tokyo, and Washington will all recalibrate their threat perceptions, and may very well see the value in intensifying their military cooperation.[18] In the meantime, the Quad can still take some steps to counter Chinese aggression. For example, the recent participation of the Quad nations in **Malabar 2021** should be repeated. An annual exercise that brings together the capital assets of all four nations fosters high-end interoperability and builds the combined capabilities of the Quad militaries, thereby improving deterrence in the region by demonstrating an increased capacity for response.[19] In conclusion, the Quadrilateral Security Dialogue should focus the combined diplomatic, information, military, and economic power of its four member nations to promote maritime security in the Indo-Pacific by fostering and strengthening rising partners in the region while coordinating to detect, analyze, and interdict illicit maritime activity. The Quad is the premiere U.S. partnership in the region for addressing maritime security, a critical component of the U.S. vision for a free and open Indo-Pacific. The U.S. will not achieve its objectives in the region if Quad efforts towards maritime security are misdirected or ineffective. Diplomacy and economic measures should focus on improving the willingness and capability of ASEAN nations to join the Quad in pursuing their mutual goal of a free and open Indo-Pacific. Quad information and military capabilities should be combined and coordinated to improve maritime domain awareness and provide a response mechanism to address illicit maritime activity. These measures would all be politically viable and would preclude a looming China from driving a wedge between the partners. U.S policy recognizes the Indo-Pacific as "*the single most consequential region for America's future*."[21] If the Quadrilateral Security Dialogue embraces its potential for fostering maritime security, America's future looks much brighter.

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Endnotes

1. Task Force 71 Public Affairs. "Australia, India, Japan, U.S. Kick Off Exercise Malabar 2021." U.S. Indo-Pacific Command News. 26 August 2021. https://www.pacom.mil/Media/News/News-Article-View/Article/2748502/australia-india-japan-us-kick-off-exercise-malabar-2021/.
2. Jaishankar, Dhruva. "The Real Significance of the Quad." The Strategist. Australian Strategic Policy Institute. 24 October 2018. https://www.aspistrategist.org.au/the-real-significance-of-the-quad/.
3. Abe, Shinzo. "Asia's Democratic Security Diamond." Project Syndicate. 27 December 2012. https://www.project-syndicate.org/onpoint/a-strategic-alliance-for-japan-and-india-by-shinzo-abe.
4. Percy, Sarah. "Maritime Crime in the Indian Ocean: The Role of the Quad." Australian National University College of Asia and the Pacific. The Centre of Gravity Series – Debating the Quad. March 2018. P. 24. http://bellschool.anu.edu.au/sites/default/files/uploads/2018-03/cog_39_web_-_debating_the_quad.pdf.
5. S. Department of Defense. "Indo-Pacific Strategy Report" June 2019. P. 16. https://navalwarcollege.blackboard.com/bbcswebdav/pid-798267-dt-content-rid-3941012_1/courses/T.SHARED.FSP.TSDM/tsdm_fsp_19_20/bb_reads_19_20/strat_4_4.pdf.
6. "ASEAN Outlook on the Indo-Pacific" 23 June 2019. P. 3. https://asean.org/storage/2019/06/ASEAN-Outlook-on-the-Indo-Pacific_FINAL_22062019.pdf.
7. Australian Government Department of Foreign Affairs and Trade. "Australia-India-Japan-United States 'Quad' Consultations." Media Release. 4 November 2019. https://www.dfat.gov.au/news/media/Pages/australia-india-japan-united-states-quad-consultations.
8. Smith, Jeff M. "The Quad 2.0: A Foundation for a Free and Open Indo-Pacific." The Heritage Foundation Asian Studies Center, Backgrounder No. 3481. 6 July 2020. P. 7. https://www.heritage.org/sites/default/files/2020-07/BG3481.pdf.
9. Hornung, Jeffrey W. "The Potential for the Quadrilateral" The RAND Blog. 22 February 2018. https://www.rand.org/blog/2018/02/the-potential-of-the-quadrilateral.html.
10. "The Potential for the Quadrilateral."

11. Cheng, Dean. “The Importance of Maritime Domain Awareness for the Indo-Pacific Quad Countries.” The Heritage Foundation. Backgrounder No. 3392. 6 March 2019. P. 8. https://www.heritage.org/sites/default/files/2019-03/BG3392.pdf
12. Australian Government, Department of Defence. “Australia, Japan, U.S. Sign Trilateral Information Sharing Agreement.” Media Release. 28 October 2016. https://news.defence.gov.au/media/media-releases/australia-japan-us-sign-trilateral-information-sharing-arrangement.
13. Panda, Ankit, “What the Recently Concluded US-India COMCASA Means.” The Diplomat. 9 September 2018. https://thediplomat.com/2018/09/what-the-recently-concluded-us-india-comcasa-means/.
14. “The Quad 2.0: A Foundation for a Free and Open Indo-Pacific.” P. 21.
15. “The Importance of Maritime Domain Awareness for the Indo-Pacific Quad Countries.” P. 9.
16. “The Importance of Maritime Domain Awareness for the Indo-Pacific Quad Countries.” P. 8.
17. Shearer, Andrew. “Quad Redux: A New Agenda for Asia’s Maritime Democracies.” The Interpreter. 10 November 2017. https://www.lowyinstitute.org/the-interpreter/quad-redux-new-agenda-asia-maritime-democracies.
18. Saha, Premesha. “The Quad in the Indo-Pacific: Why ASEAN Remains Cautious.” Observer Research Foundation. 26 February 2018. https://www.orfonline.org/research/asean-quad/
19. Graham, Euan. “The Quad Deserves Its Second Chance.” Australian National University College of Asia and the Pacific. The Centre of Gravity Series – Debating the Quad. March 2018. 7. http://bellschool.anu.edu.au/sites/default/files/uploads/2018-03/cog_39_web_-_debating_the_quad.pdf
20. “Quad Redux: A New Agenda for Asia’s Maritime Democracies.”
21. S. Department of Defense. “Indo-Pacific Strategy Report.” P. 1.

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