

The Historical Precedent for a New Pacific Nuclear-Submarine Posture

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KEY TAKEAWAYS

A fight with China will be a naval war, and after 30 years of budget cuts the number of U.S. submarines and weapons is inadequate for such a confrontation.

Today's Navy has neither the submarines nor the support infrastructure to assure victory in a war with China that observers believe might happen by 2027.

The fighting in the Pacific during World War II provides lessons for a new U.S. Pacific nuclear-submarine posture, and the U.S. should learn from them.

A growing consensus among Asia analysts in Washington posits that China is readying for a war with the U.S. over Taiwan by 2027.¹ China's leader, Secretary General Xi Jinping, has repeated in major speeches that the question of Taiwan's reunification with China cannot continue to be passed down from generation to generation²—meaning that there is a point at which peaceful means cease to be viable.

At the same time, an unbridgeable divide across the Taiwan Straits is widening, characterized by the weakening identity as “Chinese” amongst Taiwan's population.³ This trend, and deteriorating world events from Europe to the Middle East, give credence to the notion that a Chinese attack on Taiwan is becoming more likely. In the case of that war, the Chinese Communist Party's military—the Peoples Liberation Army (PLA)—has a daunting array of

This paper, in its entirety, can be found at <https://report.heritage.org/bg3870>

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MAP 1

Naval Bases Relevant to Nuclear Submarine Operations Today



Today the U.S. Navy operates from a range of bases that are a relic of the Cold War and World War Two. These bases sustain forward deployed submarines on extended deployments across the Indian and Pacific Oceans, but many are under severe threat from China.

- 1 Naval Support Activity, Bahrain**
U.S. Fifth Fleet headquarters
- 2 Lemonnier, Djibouti—Camp Lemonnier**
- 3 Diego Garcia—Navy Support Facility Diego Garcia**
- 4 Singapore—Commander Logistics Group Western Pacific**
- 5 Busan, South Korea—Fleet Activities Chinhae Navy Base**
- 6 U.S. Fleet Activity Yokosuka, Japan**
U.S. Seventh Fleet headquarters
- 7 U.S. Fleet Activity Sasebo, Japan**
- 8 Okinawa, Japan—Naval Base White Beach**
- 9 Naval Base Guam—Navy Expeditionary Force Command Pacific headquarters**
- 10 Darwin, Australia—Marine Rotational Force Darwin**
- 11 Joint Base Pearl Harbor-Hickham, HI**
U.S. Pacific Fleet headquarters
- 12 Naval Base Kitsap**
- 13 Naval Station Everett, WA**
- 14 Naval Base San Diego and Naval Base Coronado, CA**
U.S. Third Fleet headquarters

NOTE: Locations are approximate.

SOURCE: Heritage Foundation research.

anti-access/area denial (A2/AD) capabilities, which U.S. and allied forces will have to overcome. The surest method of taking the fight to the PLA early in that war will be with submarines operating securely underneath China's A2/AD sensors and weapons.

A fight with China will be a naval war where the numbers of submarines and their munitions will matter. But, after 30 years of budget cuts and high operational tempo on too few ships, the number of U.S. submarines and weapons is inadequate. Currently, the Navy assesses that it needs a fleet of 66 nuclear-powered attack submarines and has only 49 in its fleet.⁴ That deficit equates to an estimated 16 nuclear submarines that could be maintained on station in a war against China's fleet of more than 320 warships.⁵ This is one reason why the Australia–U.K.–U.S. (AUKUS) nuclear-submarine initiative is of strategic importance—though it will arrive too late to influence events in this decade. There is one exception: Posturing repair and rearming facilities in Australia which is just beginning. A case in point is the recent arrival of a U.S. submarine tender at HMAS Stirling, where Australian sailors and shipyard workers have begun the pathway to being certified for conducting nuclear-submarine maintenance.⁶ As such, this is a return to the past when U.S. submarines operated from Australia during World War II.

While today's modern nuclear submarines enjoy greater undersea endurance and the ability to sustain high speeds, they are still limited like their World War II ancestors in the numbers of weapons they can carry. Likewise, there will be casualties of war and the need to conduct battle-damage repairs as near to the fighting as possible. The bottom line is that today's submarine tenders and safe ports will be needed in greater numbers than today. Lessons from World War II's submarine campaigns can demonstrate how best to achieve this needed submarine logistic posture.

Lessons of the Pacific War: Informing a New Nuclear-Submarine Posture

Several key historical events, with relevance to today, shaped submarine operations in the Pacific during World War II. These include the vulnerability of Pearl Harbor immediately after the December 7 attacks, evacuation of the Philippines in 1942, and forward operations from Naval Base Ulithi in the western Pacific's Ulithi Atoll. From these events key insights relevant to modern submarine warfare stand out: the importance of submarine tenders and forward basing to sustain intense submarine patrols near the enemy.

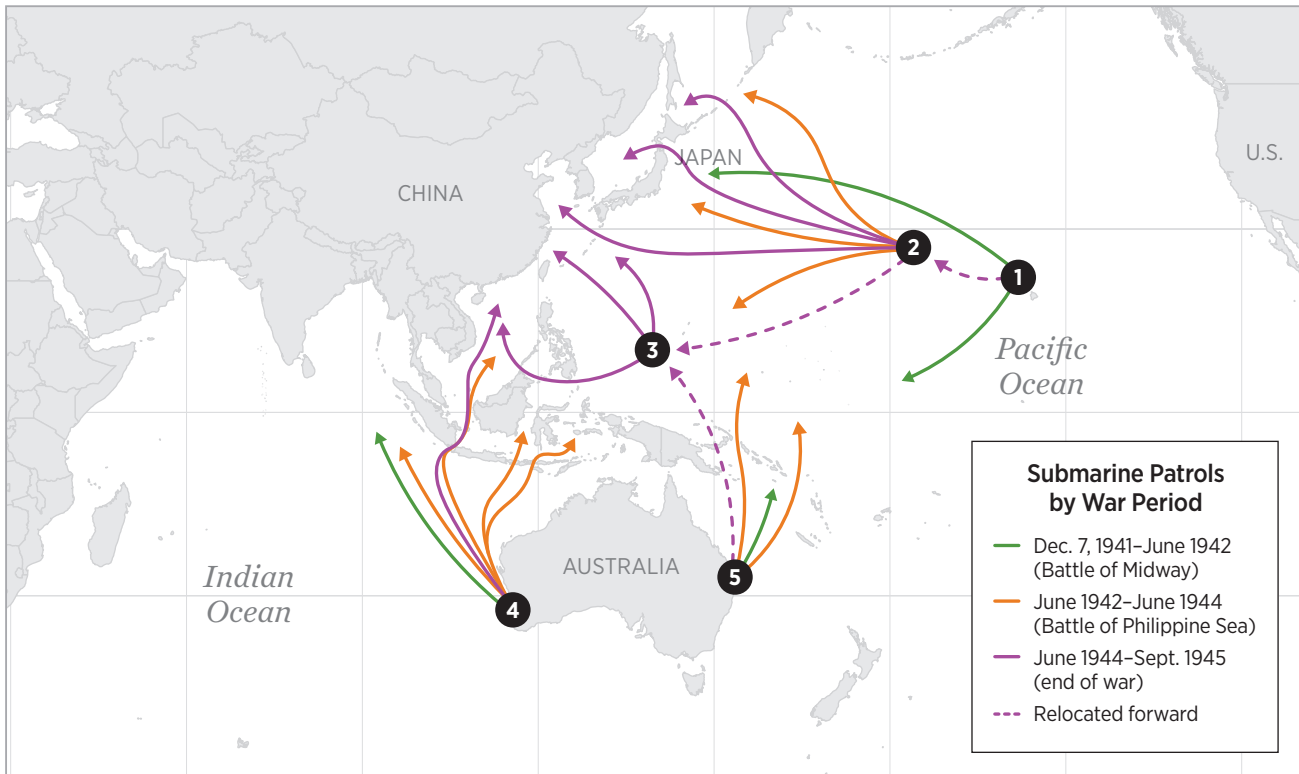
Pearl Harbor to Midway. Immediately after the attack on Pearl Harbor, the U.S. submarine fleet began to take the fight to Japan. Sustaining submarines in Japanese waters required a forward base, which Midway provided, saving almost two weeks of sailing time by allowing for repairs and provisioning of submariners there instead of Pearl Harbor.⁷ Only after the victory in the June 1942 Battle of Midway that removed the Japanese threat of invasion was a submarine base there feasible. Typically, after a month-long wartime patrol in Japanese waters, boats would arrive and crews were flown onward to Hawaii for needed rest and recuperation, while repair crews took over and got the boats ready, which could take about two weeks.⁸ This routine would persist from 1942 till the conclusion of the war in 1945.

Evacuation from Cavite to Australia. In the Philippines, U.S. plans for protracted resistance from fortifications in Corregidor and intercepting Japan's invasion forces evaporated. Events unfolded into a withdrawal to safer basing in Australia by March 1942. From Australian bases in Fremantle and Brisbane, American submarines conducted war patrols and repairs.⁹ All told, 127 U.S. submarines operated from Australia, conducting 353 patrols between 1942 and 1945.¹⁰ These submarines contributed to a successful Indian Ocean campaign, and the severing of Japanese supply lines from oil fields in southeast Asia.

Ulithi Forward Basing Made Possible by Submarine Tenders. As Admiral Chester Nimitz's island-hopping campaign reached the Mariana Islands, an opportunity for a forward staging base presented itself at Ulithi.¹¹ Ulithi is a large protected lagoon located midway between the island of Palau and Guam and about 100 nautical miles from the island of Yap.¹² The presence of large naval forces, more than 600 warships at times, operating from the lagoon was a state secret for years even after the war, but this did not prevent repeated Japanese attacks resulting in the loss of fleet oiler *Mississinewa* on November 20, 1944.¹³ Despite this, the lagoon remained a critical repair and provisioning base from 1944 till the end of the war. A "floating" submarine base was made possible with submarine tenders like the ships *Sperry* and *Sumner*. The numerous floating dry docks that were brought to the lagoon were critical, and saved the carrier *Franklin* after it was severely damaged during the invasion of Okinawa.¹⁴ Other ships saved there included aircraft carriers *Ticonderoga*, *Bennington*, and *Hancock* and cruisers *Houston* and *Reno*.¹⁵

MAP 2

Pacific Submarine Operations and Bases of World War II



U.S. submarine wartime patrols evolved as the war progressed. In a modern Pacific War, the same thing would play out with U.S. nuclear submarines at first operating from Hawaii then gradually moving to more forward bases supported by submarine tenders.

1 Pearl Harbor

The attack on Pearl Harbor on December 7, 1941, led to the United States' formal entry into the war.

2 Midway

The Battle of Midway marked a turning point in the Pacific Theater of World War II, as the U.S. Navy's decisive victory halted Japanese expansion and shifted the momentum in favor of the Allies.

3 Ulithi Atoll

Ulithi Atoll served as a crucial logistical base for the U.S. Navy during World War II, facilitating operations in the Pacific and supporting key battles by providing essential supplies and repair facilities.

4 Fremantle (near Perth), Australia

Fremantle became a vital base for Allied forces during World War II, serving as a strategic staging point for operations in the Pacific and a key supply hub for the U.S. Navy and other Allied forces.

5 Brisbane, Australia

Brisbane played a critical role as a major Allied base during World War II, serving as a command center and logistical hub for operations in the Pacific, significantly contributing to the war effort against Japan.

NOTE: Locations are approximate.

SOURCE: Heritage Foundation research.

Wartime Legacy to 21st-Century Submarine Pacific Posture

These wartime experiences provide relevant lessons for today's nuclear submarine force as it contends with a larger hostile Chinese fleet backed by long-range missiles. The objective of the PLA will be to blockade, then invade, the island of Taiwan while holding off resupply and support to resisting forces. This will make interdiction of resupply to PLA forces on Taiwan as well as their defensive forces arrayed around Taiwan top priority targets for allied submarine forces. Secondly, a range of traditional submarine missions would include mining of critical Chinese ports, land strikes using ballistic and cruise missiles, and interdiction of Chinese shipping on the high seas. Sustaining the level of force needed will require forward bases, resupply of torpedoes and cruise missiles, and secure locations to conduct repairs and resupply.

The challenge for today's U.S. submarine force is focused geographically in east Asia, which will ease the development of a focused posture of forces, including:

Submarine Tenders Needed, Rotated to Forward Austere Secure Anchorages. Today, two submarine tenders exist in the U.S. Navy and both are based in Guam. The island is also a prime target of medium-range and intermediate-range missiles, estimated by the Department of Defense to number around 1,500 in 2023.¹⁶ Missile attacks pose a persistent threat not just to Guam, but to other anchorages in the so-called second island chain that includes Ulithi. Needed will be expeditionary safe anchorages outside the range of the majority of Chinese missile strikes, such as Chuuk Lagoon. Sustaining nuclear submarines from such locations necessitates modern submarine tenders to restock weapons, conduct minor repairs, and provision. War records of 110 incidents of battle damage that did not result in loss of the submarine show that most damage could be repaired by a tender.¹⁷ But, with too few nuclear submarines and an industrial base unable to replace losses, even the most severely damaged will need to be repaired and returned to service fast. To do so, major shore bases with dry docks are required.

Meanwhile, the Navy will be retiring its aged submarine tenders *Frank Cable* in 2029 and *Emory S. Land* in 2030, but it has only just started the process of designing replacements. This is tardy to say the least, making it necessary for the Navy to find assets that can execute the submarine tender mission until a replacement is put to sea, likely in the next decade.¹⁸ One possibility is the repurposing of underutilized offshore mobile oil rigs, like the one used by the Navy as a sea-based X-band radar that is key in Pacific

missile defense.¹⁹ Modification to existing mobile offshore oil rigs could reasonably be executed well before the retirement of the Navy's submarine tenders and before the 2027 peak danger of war in Asia.²⁰ Such a concept was unveiled at the 2024 Sea Air Space conference, including a potential role as a destroyer tender to conduct much needed at-sea rearmament of vertical launch weapon systems.²¹

Forward Bases Needed in Australia. Expeditionary safe anchorages can episodically sustain a limited number of submarines, but large shore bases will be required for major repairs and as hubs for movement of materiel that can be carried forward on the submarine tenders (such as torpedoes and food). For this reason, Australia once again will play a role in future nuclear submarine campaigns in the Indian Ocean and South China Sea. However, Australia's capacity to conduct repairs on nuclear-powered submarines is nascent and constrained by limited dry dock capacity. Today the Australian navy is serviced by the World War II vintage Captain Cook dry dock located in Sydney harbor.²² That dry dock will be decommissioned within several years, long before a replacement can be built in Stirling where the Australian nuclear submarines will be based and where U.S. submarines are planned to be based as part of the Submarine Rotational Forces-West (SRF-W).²³ Finally, a modern submarine wartime campaign would see a much higher operational tempo than that of World War II with patrols likely lasting two weeks instead of a month as nuclear submarines are able to more rapidly position for multiple attacks and so more quickly expend their limited torpedoes and missiles.²⁴

Eventually this tempo will drop as land targets for submarine-launched strikes ebb and China's ships are sunk; a fleet anticipated in 2027 with more than 400 warships, more than 142 Coast Guard cutters, and more than 6,000 commercial ships larger than 1,000 gross tons.²⁵ This will be a protracted campaign given China's massive shipbuilding and repair capacity if left unmolested in a future war. At the same time, losses of U.S. submarines would act in the opposite direction and drive operational tempo up for the remaining submarines. That said, Australian bases are still too far away from combat to be enough to sustain the needed tempo of wartime operations, and there is not adequate dry dock capacity for repairs; for both these reasons another proven war-winning capability is needed: floating dry docks.

Floating Dry Docks Needed that Can Be Repositioned for Battle-Damage Repairs. Floating dry docks made the advanced base at Ulithi possible in World War II, and they are needed to service submarines outside Chinese missile ranges and to mitigate limited Australian dry dock capacity.

Stirling is more than 3,500 nautical miles from the southern approaches of the Taiwan Strait, and the port of Darwin is 1,000 nautical miles closer. A floating dry dock in Australia today does two things: It provides a near-term replacement for Captain Cook dry dock as well as the ability to be moved forward. Floating dry docks will also be important for repairs conducted at several favorable anchorages in the central Pacific. In the 1930s the Washington Treaty's limitations on warship construction and proscription against fortifying island garrisons meant that the wartime U.S. fleet had to rely on mobile dry docks.²⁶ Today, cost efficiencies and not treaty obligations have resulted in too few bases or ports from which a years-long modern Pacific nuclear-submarine campaign can be executed. Floating dry docks will again play a key role as mobile repair bases in the Pacific; currently, however, neither the U.S. Navy nor the Australian navy have floating dry docks to service the newest U.S. nuclear submarines, the *Virginia*-class, nor can current workloads afford those that exist from being diverted to support a forward deployed submarine fleet.

Submarine Salvage Operations Are Under Threat. Replacing lost nuclear submarines in a near-term war is unlikely given the shipyard resources needed and the years it takes to build modern nuclear submarines. This reality makes recovering heavily damaged boats and returning them to wartime patrol a paramount concern. Salvaging heavily damaged nuclear-powered submarines while under enemy threat is something no navy has done, but the U.S. Navy will be driven by necessity to consider it. Three nuclear submarine incidents since 2000 are insightful as to the challenge involved:

1. The first incident was the August 2000 sinking of Russia's nuclear-guided-missile submarine *Kursk* caused by the detonation of onboard weapons. The *Kursk* settled on the sea floor at 354 feet, with the engine room watch section trapped alive. Russian salvage operations were a failure, leading to a thaw in Russian intransigence, with Vladimir Putin finally accepting, days later, British and Norwegian assistance. Those efforts eventually were successful but not until the entire crew had perished. The depth of the submarine, adverse weather conditions in the Barent Sea, and damage to the *Kursk's* hatches all conspired against the crew and successful recovery.²⁷
2. The next incident occurred on January 8, 2005, with the near loss of the U.S. nuclear submarine *San Francisco* after running into a seamount at high speed. The Navy's investigation at the time attributed

poor navigational practices and operational planning to the grounding 360 miles southeast of Guam.²⁸ Had the boat been unable to remain on the surface after having its ballast tanks damaged, the boat would have likely sunk to depths beyond its design and been lost. Barely able to remain afloat, the boat returned to Guam where a floating dry dock allowed repairs to its ballast tanks that enabled the more than 5,000-mile trek to the Naval shipyard in Puget Sound, Washington, for full repairs. Nearly three and a half years later, in 2009, the *San Francisco* returned to service.²⁹ Military investigators did commend the crew for taking actions that saved the ship and kept it seaworthy enough to return to port.

3. The third incident occurred on October 2, 2021, when special mission nuclear submarine *Connecticut* ran aground in the South China Sea.³⁰ Given the secrecy and location of this incident, it most closely approximates the challenges the Navy would face in recovering severely damaged submarines within China's A2/AD envelop. From the declassified command investigation, given the forces that China would have in the area, it is very likely that, when the submarine surfaced and transited out of the area after the grounding, it would have been attacked repeatedly unless able to submerge and depart the area at high speed or covered by friendly military forces.

These three nuclear submarine incidents are insightful for which capabilities and skills will be needed to recover severely damaged nuclear submarines during a future Pacific war. First, the crews need to be trained and practiced in damage control techniques to secure and navigate a damaged boat to safer waters. By all accounts, the Navy seemingly has retained this skill set by crews when at sea; in port is a different story as evidenced by the July 2020 preventable loss of large amphibious warship *Bonhomme Richard*.³¹ Second, military forces must be ready to deploy quickly to the site of a damaged boat and escort it to a safe anchorage for repairs. Today the Navy is postured to affect a peacetime rescue of a submarine in waters less than 2,000 feet within 96 hours.³² The undersea geography of most of the Pacific Ocean in which wartime nuclear submarines would be operating, however, is so deep as to make the loss of depth control fatal and the submarine hulk beyond recovery. That said, key components in today's recovery operations are designed to operate from any available commercial or naval vessel and each of today's two active units consists of:³³

- **An assessment/underwater work system.** This system consists of remotely operated vehicles and an atmospheric dive system to enable divers to assess the condition of the stricken sub, clear debris, and access the escape hatch on a stricken submarine. One may recall the *Kursk* experience and inability of Russian salvage divers to open damaged hatches.
- **A submarine rescue system.** A rescue-capable system consists of a Pressurized Rescue Module (called Falcon) that can rescue 16 sailors at a time from a stricken submarine.
- **A submarine decompression system.** This system consists of a transfer-under-pressure vehicle and hyperbaric chamber to move sailors exposed to high pressures to the surface safely.

Recovery of the crew is important and submariners are hard to replace as well, but the war would likely be over before a replacement submarine could be built. This makes recovery of a salvageable nuclear-powered submarine critical. Assuming the ballast tanks and pressure hull can be rendered intact, divers and a salvage ship would be needed to refloat and then transport the submarine hulk to a dry dock for repairs and return to service. The Navy today has two rescue and salvage ships to carry out this mission: The *Grasp*, operating in the Atlantic and Mediterranean, and the *Salvor* in the Pacific. These ships, however, with a slow transit speed of 14 knots, limited to support of diving operations to 190 feet, and 150 ton hauling capacity, are not adequate for this task.³⁴ Recovery of a modern nuclear submarine requires a heavier lift and towing-capable ship to quickly move to safer waters. Today the best fit for this mission would be a heavy-lift ship like the *Blue Marlin*, which transported the stricken destroyer *Cole* after a suicide boat attack in October 2000. This ship has a speed of 13 knots and can carry up to 75,000 tons.³⁵ There are even larger such ships, which would be needed to fit today's larger nuclear submarines. Higher maximum speeds closer to 20 knots are still needed to more rapidly move to and from the site of the stricken boat. Of course, this type of recovery (if in waters less than 2,000 feet) would require military control of the area to defend against further Chinese attacks.

Assessment and Recommendations for the U.S. Navy

Clearly the Navy of today has neither the submarines nor the support infrastructure to assure victory in a near-term war. This reality necessitates

a change in approach—an urgent retooling of the U.S. Naval nuclear laydown of forces in the Pacific. The U.S. Navy should:

Base Submarines Closer to Peacetime Missions, Where They Can Rapidly Support Wartime Patrol Tempo in Australia. The Navy’s long-term shipbuilding plans, informed by operational necessities, stipulates a fleet of 66 nuclear submarines, but, as of September 2024, only has 49. Of these, accounting for non-deferrable maintenance (such as nuclear refueling) as well as the need to provide undersea defense of the nation’s at-sea nuclear deterrence (nuclear ballistic missile submarines or SSBNs), the number available for supporting wartime patrols today is more likely 43 boats. These boats would be operating on a six-week cycle (two weeks combat, two weeks transit to/from patrol area, two-week refit/rest). Given this cycle, 14 boats could ideally be at sea conducting wartime patrols at maximum operational tempo. The most in-demand theaters of operations are in the East and South China Seas, followed by the Philippine Sea and the Indian Ocean. These numbers and geographic focus make additional basing options important in Australia given its proximity to both the Indian Ocean and South China Sea. One may recall the Pacific War experience of the submarine fleet.

Required Supporting Action. The Secretaries of State and Defense must secure adequate host-nation support for basing four U.S. nuclear submarines and an associated tender in Stirling and Darwin, Australia. Furthermore, the Secretary of Defense must secure concurrence and necessary supplemental funds from Congress to execute this basing no later than 2027.

Establish Expeditionary Submarine Safe Harbors Outside China’s Medium-Range and Intermediate-Range Missile-Attack Capability in the Federated States of Micronesia. China has for years made clear its intention of targeting and diminishing military operations on and from Guam. This will require dispersing U.S. submarine support operations off Guam outside this missile-attack range. Leveraging Compact of Free Association (COFA) treaty agreements with the Federated States of Micronesia allows the use of safe harbors at Chuuk Lagoon, Kosrae, and Pohnpei—and represent good starting points for expeditionary safe harbors.

Required Supporting Action. The Chief of Naval Operations must name expeditionary submarine support sites, with the Secretary of the Navy informing Congress. The Secretary of State is to notify associated COFA states of the intention to execute base access rights and assess necessary support with the Department of the Interior to be provided hosting states in accordance with sections 311 and 321 of the COFA treaty.³⁶

Accelerate the Procurement of New Submarine Tenders and Field a Gap-Filler Capability in Two Years. The Navy has only just begun the process of designing a replacement for its antiquated submarine tenders, with delivery of a new ship not likely until next decade—this is late to task. As the Navy accelerates the effort for a new submarine tender, a stop-gap capacity is required. As such, potential gap fillers include repurposed inactive commercial mobile offshore oil rigs and mothballed Naval logistic ships, such as the two Expeditionary Transfer Dock (ESD) ships. The Navy should pursue both options with needed modifications to support submarine rearming, nuclear propulsion plant maintenance, and minimal self-defenses to be operated beyond reasonable expected enemy action. Finally, the Navy should secure (procurement or lease with Naval reserve or merchant marine crew) a heavy-lift ship to remain in the Western Pacific to support wartime recovery operations of stricken submarines.

Required Supporting Action. The Secretary of the Navy should request from Congress funding for advanced procurement and begin construction of replacement submarine tenders that can be delivered before 2030. Second, Congress should provide the Navy additional funding to re-activate an ESD, to contract a repurposed mobile offshore oil rig as a mobile forward submarine support structure initially moored in Chuuk Lagoon, and to contract on an exploratory basis a heavy-lift vessel to develop contested submarine salvage techniques.

Develop the Capabilities and Competencies Needed to Execute Contested Submarine Salvage Operations. The recent recovery and towing off Yemen's coast of Greek commercial tanker *Sounion* following attacks by the Houthis in September 2024 provides a glimpse into the operational challenges of such a task. Of course, raising and towing a stricken submarine within Chinese striking range is an exponentially tougher challenge necessitating specialized capabilities and skill sets. Such a mission would likely require sustained air dominance as well as sea control proximate the recovery and the exfiltration path of the stricken submarine. In the end, the danger from China and the depth of the waters involved, as well as the environmental conditions, could make such missions impossible. However, having the ability to execute such a mission given the limited number of nuclear submarines makes the effort worth investing in.

Required Supporting Action. The Chief of Naval Operations should establish a task force devoted to developing the techniques and capabilities required to execute contested recovery of a stricken submarine. This task force would conduct an annual exercise under the authority of the Pacific Fleet to validate and refine this work. This exercise would likely be incorporated into the existing Submarine Search and Rescue Exercise (SMASHEX).³⁷

MAP 3

Proposed Pacific Nuclear Submarine Posture



Too many of today’s legacy naval bases in the Indo-Pacific are too close to Chinese threats. New options are needed to support aggressive submarine wartime patrols from expeditionary locations and bases.

- 1 Midway**
Re-establish Midway for limited nuclear submarine support: re-arming, light repairs, and resupply.
- 2 Chuuk Lagoon**
Establish forward expeditionary basing in Chuuk Lagoon supported by submarine tenders or repurposed vessels such as mobile oil rigs or mothballed expeditionary transfer docks
- 3 Darwin, Australia**
Forward deploy a floating dry-dock to Darwin, Australia to support expeditionary repairs.

- 4 Stirling, Australia**
Forward base a submarine tender in Stirling, Australia, with rotational submarine presence per existing AUKUS plans.
- 5 Chinhae, South Korea**
- 6 Sasebo, Japan**
- 7 Yokosuka, Japan**

NOTE: Locations are approximate.
SOURCE: Heritage Foundation research.

Conclusion

Today there are not enough nuclear submarines to sustain wartime operational tempo from bases in Hawaii or the continental U.S. This assumes that bases in Guam and in Asia (that is Japan) would be under near-constant Chinese attack. Options are urgently needed to maximize the effectiveness of today's smaller fleet, and the lessons of World War II point the way. Aside from building more submarines, needed are mobile large floating dry docks that can service today's newest nuclear submarines and a fleet of modern submarine tenders to replace the two venerable ones in Guam—*Frank Cable* and *Emory S. Land*—both commissioned in 1979 and well beyond normal service life.³⁸ Existing and new floating dry docks and submarine tenders should be sent to the Pacific where they should begin operations in Chuuk Lagoon and Darwin. The work for new tenders and dry docks is only just beginning, and there is little time to prepare for a potential Pacific War.

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