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Seabasing remains a vital capability in EABO despite technological advancements contesting sea control and assured communications. To improve seabasing and develop more sustainable and robust concepts of logistics support in the Indo-Pacific region, the United States must (1) increase and improve training opportunities with allied and partner logistics and seabasing fleets to improve interoperability, (2) develop a maritime logistics common operating picture that ties in current allies and partners, and (3) increase the use of economic statecraft and 'geoeconomics' to improve maritime access in the Indo-Pacific region through infrastructure investment and overseas manufacturing.

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MASTER OF MILITARY STUDIES

Seabasing in the Indo-Pacific Region: A Novel Strategic Perspective

SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF MILITARY STUDIES

Major Nicholas S. Lybeck

AY2020-21

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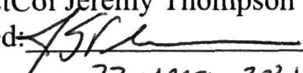
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Executive Summary

Title: Seabasing in the Indo-Pacific Region: A Novel Strategic Perspective

Author: Major Nicholas S. Lybeck

Thesis: The United States must implement a seabasing strategy that increases the speed and volume of wartime materiel delivered from ship to shore, improves interoperability with allies and partners through training exercises, develops a logistics common operating picture, and employs economic statecraft to increase access and strengthen infrastructure to support seabasing in the Indo-Pacific region.

Discussion: As the size of China's navy surpasses the United States Navy, interoperability and integration with allies in the region will be integral to developing options to respond to Chinese aggression. The United States must embrace closer partnerships with allies in the region through a whole-of-government approach to strategy development. Seabasing frees, the United States from a reliance on expensive forward infrastructure. However, seabasing can negatively affect on our relationships with allies and partners in the region. Without a clear strategy that counters China's anti-access/area denial (A2/AD) threats, fosters improved interoperability for seabasing with allies and partners in the region, and improves strategic access that enables seabasing vis-à-vis greater economic investment in infrastructure and technology transfers, the United States may be partly responsible for separating ourselves from our allies and interests.

Conclusion: To improve seabasing and develop more sustainable and robust concepts of logistics support in the Indo-Pacific region, the United States must (1) increase and improve training opportunities with allied and partner logistics and seabasing fleets to improve interoperability, (2) develop a maritime logistics common operating picture that ties in current allies and partners, and (3) increase the use of economic statecraft and 'geo-economics' to improve maritime access in the Indo-Pacific region through infrastructure investment and overseas manufacturing.

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Preface

This study was completed to spur discussion about seabasing, a vital capability that enables maritime operations. Too often the United States looks for a technological solution to preserve its military advantage. Technology is certainly an important component that enables our military to achieve victory on the battlefield. However, I hope to offer a different perspective on how the United States can improve its seabasing capability and sustain maritime operations in the Indo-Pacific.

I am thankful for the support I have received from Command and Staff College and the many people behind the scenes that worked diligently to develop a realistic timeline to complete the MMS and provided the resources necessary to make this a reality. First, I would like to thank my peers in Conference Group 15 for pushing me to be a more critical thinker and a better writer. Second, I owe a “thank you” to LtCol Ken Goedecke for his professionalism and dedication to his students. The students of Conference Group 15 were blessed to have him as our Faculty Advisor. Thirdly, I owe deep appreciation to Dr. Matthew Slater for his patience, experience, and wisdom. He provided timely and clear guidance that helped immensely. Most importantly, I am forever grateful to my wonderful wife, Deanna, and my three incredible kids. Their love and devotion were the fuel that got me across the finish line.

Introduction

The *2017 National Security Strategy* states that the United States (U.S.) is in an era of great power competition: “China and Russia challenge American power, influence, and interests, attempting to erode American security and prosperity.”¹ This strategic focus on great power competition coupled with the Obama Administration’s rebalance in Asia had significant implications for diplomatic, information, military, and economic instruments of national power. The pivot to great power competition and the new regional focus in the Indo-Pacific resulted in the formation of a new naval operating concept designed to deter and defeat peer adversaries. As expeditionary advanced base operations (EABO) are implemented in the Indo-Pacific region, the requirement to seabase will increase. According to Joint Publication 3-02, *Amphibious Operations*, seabasing is defined as “the deployment, assembly, command, projection, reconstitution, sustainment, and re-employment of joint power from the sea without reliance on land bases within the operational area.”² The U.S. must implement a seabasing strategy that increases the speed and volume of wartime materiel delivered from ship to shore, improves interoperability with allies and partners through training exercises and development of a logistics common operating picture, and employs economic statecraft to increase access and strengthen infrastructure to support seabasing in the Indo-Pacific region. This paper will address the following research question: how will seabasing change as EABO is implemented in the Indo-Pacific region?

As the size of China’s navy surpasses the U.S. Navy, interoperability and integration with allies in the region will be integral in developing responses to Chinese aggression. The U.S. must embrace closer partnerships with allies in the region through a whole-of-government approach to strategy development. General David Berger, the 38th Commandant of the Marine

Corps, reiterates this point: “by developing a new expeditionary naval force structure that is not dependent on concentrated, vulnerable, and expensive forward infrastructure and platforms, we have to frustrate enemy efforts to separate U.S. Forces from our allies and interests.”³ Seabasing frees the U.S. from a reliance on expensive forward infrastructure. However, seabasing can also have a negative effect on our relationships with allies and partners in the region. Seabasing can free the U.S. from a reliance on overseas bases. However, the lack of a permanent presence in regions, accomplished partly through overseas bases, can cause allies and partners to question the U.S.’s commitment to those regions. Without a clear strategy that counters China’s anti-access/area denial (A2/AD) threats, fosters improved interoperability for seabasing with allies and partners in the region, and improves strategic access that enables seabasing vis-à-vis greater economic investment in infrastructure and technology transfers, the U.S. may be partly responsible for separating ourselves from our allies and interests.

This paper will begin by describing the current and future threat environment posed by A2/AD technology and strategies amid a growing Chinese Navy. Next, seabasing will be defined and a brief discussion of seabasing’s application in the range of military operations followed by the current challenges facing seabasing. The following section will highlight the importance of interoperability through a case study of the American, British, Dutch, Australian Command (ABDACOM) during World War Two that highlights the critical role of coalition warfare and the importance of interoperability during multinational and seabasing operations. In the proceeding section, the role and application of economic statecraft by the U.S. will be important to enabling seabasing and combating China’s growing influence through its application of coercive economic statecraft. Lastly, recommendations will be offered to successfully implement a seabasing strategy to fight and win in a A2/AD environment.

China, A2/AD, and EABO

After the Cold War and the fall of the Soviet Union, the U.S. enjoyed the advantage of assured sea control and access. However, the proliferation of A2/AD weapons and expansionist countries competing with the U.S. for power eroded the competitive advantages of the U.S. When defining A2/AD, Nathan Freier, a senior fellow in the International Security Program at the Center for Strategic and International Studies, observes that while A2/AD are often lumped together, they mean different things. Anti-access challenges preclude the U.S.' entrance into a foreign theater or denying effective use and transit of the global commons.⁴ Lethal anti-access instruments include sophisticated longer-range capabilities like anti-ship cruise missiles, ballistic missiles, submarines, weapons of mass destruction, and offensive space and cyberspace assets. Moreover, area denial challenges are viewed as restricting freedom of maneuver of U.S. forces once they have arrived.⁵ However it is defined, A2/AD technology presents a formidable threat to the U.S.' ability to gain and maintain sea control, and the People's Republic of China continues to proliferate and develop A2/AD capabilities in the Indo-Pacific Region.

Chinese threats to access have become more sophisticated in recent years and are a part of a broadened package that include more than technology. While the U.S. maintains a strong advantage in certain warfare domains, China retains a decisive advantage in missile strike warfare and anti-ship cruise missiles.⁶ In addition to militarizing islands within the first and second island chain, the People's Liberation Army developed the Dong-Feng 21, designed to specifically destroy U.S. aircraft carriers, with an operational range estimated at approximately 1,770 kilometers. China's growing navy is also of great concern. The People's Liberation Army-Navy will likely possess twice as many warships and submarines as the U.S. Navy along with a robust maritime intelligence capability, representing a significant naval threat to U.S.

naval operations in the region.⁷ As China's fleet is mostly located in the Indo-Pacific region and the U.S.' fleet remains committed throughout the globe, the U.S. Navy and Marine Corps can expect to "fight its way to the fight" and operate in contested maritime domains.

In response to the great power competition, the U.S. Navy and Marine Corps have developed naval operating concepts designed to operate and defeat adversaries within these environments. Littoral operations in a contested environment and EABO are U.S. Navy and Marine Corps operating concepts that recognize the dangers and importance of littoral regions to sea control and advocate for a persistent forward presence to achieve advantage against adversaries.⁸ Specifically, EABO is a joint U.S. Navy and Marine Corps operating concept that supports the joint force maritime component commander and fleet commanders in the fight for sea control by employing precision and long-range fires on key maritime terrain to create an A2/AD environment in close and confined seas.⁹ Forward-deployed forces are intended to act as deterrents or be able to quickly respond to aggression or crises. Seabasing, in this case representing at-sea logistics, is a critical enabler of forward postured forces. As a global maritime power, the U.S. faces adversaries that possess a position of advantage in close proximity to their territory while adding greater complexity to naval operations by new long-range precision missiles that have added a landward dimension to naval combat.¹⁰ This operating environment challenges old assumptions of sea control and access while demanding new means, new methods and new competencies in naval combat.¹¹

Seabasing: Definition, Application, and Challenges

While doctrine is a starting point to understanding seabasing, it is more helpful to think about seabasing as having a base at sea: a port, an airfield, maintenance facilities, command and

control, and sustainment.¹² Seabasing enables naval forces to project combat power ashore and sustain landward forces from the sea base if the tactical situation permits. Seabasing can be composed of individual platforms, carrier strike groups, amphibious ready groups, Maritime Prepositioning Ships Squadrons, the U.S. Army's Afloat Prepositioned Stocks program, and may include joint and coalition forces.¹³

Seabasing, as a military concept, does not have a defined beginning. Like coalition warfare, seabasing has been around for over two millennia, taking different forms as warfare was waged on land and sea. Operations in the South Pacific during World War Two birthed the current conception of operating from a seabase. The U.S. Navy devised a system of advanced bases, shore-based facilities that stored the provisions necessary to prosecute a long-distance war, and mobile bases designed around the Service Squadron. The Service Squadron was capable of underway replenishment and carried fuel, ammunition, food, and repair capabilities in a convoy with the battle fleet.¹⁴ The topic of seabasing has been the subject of intense discussion and debate following the end of the Cold War.¹⁵

The intense debate about seabasing occurred during a time when sea control was relatively assumed by the U.S.. The Soviet Union collapsed in 1991 and there were no serious maritime threats to the U.S.. Notably, in the last 20 years, the current version of seabasing evolved primarily as a result of crisis response conditions with disaster relief and humanitarian assistance operations.¹⁶ For example, in 2010, a massive earthquake measuring 7.3 on the Richter scale struck Haiti and caused catastrophic damage to infrastructure and human life. Over 500,000 casualties and over 150,000 deaths resulted with over a million left homeless. Operation Unified Response was established and included the USS Carl Vinson, the 22nd Marine Expeditionary Unit embarked on four amphibious-class ships, and the maritime

prepositioning ship USNS Lummus, which was loaded with U.S. Agency for International Development materiel as well as Department of Defense disaster relief supplies.¹⁷ The earthquake caused severe damage to Haitian infrastructure and created an anti-access environment that prevented the ships from anchoring at Port-Au-Prince port; as a result, forces ashore were supported from the seabase. While the 2010 earthquake in Haiti represented an environmental A2/AD threat, China continues to rapidly develop and refine a complex A2/AD threat that is challenging U.S. access to the Indo-Pacific region.

China's rising navy and the rapid technological developments that are enabling A2/AD strategies from far greater distances from land. Sea control efforts are now heavily contested. Seabasing remains a vital capability in EABO despite technological advancements contesting sea control and assured communications. However, the current and future operating environment and strategic context will place demands on seabasing that require a novel strategic perspective.

While the U.S. Navy continues to develop technological innovations to reduce the time that it takes to off-load materiel, allies and partner navies are able augment efforts to off-load materiel. The U.S. Navy's Maritime Prepositioning Force (MPF), a program of at-sea vessels designed to transport equipment and supplies that enable the rapid deployment and sustainment of combat formations ashore, is a form of seabasing and, when employed, constitutes a sustainment base at sea. The MPF program "strategically places military equipment and supplies onboard ship in key ocean areas to ensure rapid availability during a major theater war, humanitarian operation, or other contingency," with vessels that are able to off-load pier side in ports or loiter off-shore as part of a larger seabase and discharge cargo and supplies as required.¹⁸ However, there are operational limitations with the U.S. Navy's MPF program. Scale and speed are themes of the MPF program, and while the MPF enables the rapid

deployment of forces into theater, it can take up to a week to off load its supplies ashore, and timelines are dependent on sea state and weather when conducting an off-load in the open ocean using U.S. Navy vessels that transport warfighting materiel from ship to a secure beach.¹⁹ Fixed infrastructure like ports and airfields, that can facilitate an off-load from MPF ships, are likely known targets for adversary cruise and ballistic missile attacks. As such, the timely off-load of equipment in a conflict zone reduces risk to force and risk to mission while maintaining operational tempo in the Indo-Pacific region.

Given the current challenges facing seabasing in terms of speed of off-load and volume of supplies that the MPF fleet is able to push ashore, advanced bases and port facilities will play an important role in sustaining operations during conflict in the Indo-Pacific region.

Specifically, the proliferation, and low-cost, of drone technology coupled with long-range precision ballistic missiles creates significant risk to MPF and other seabasing vessels the longer they loiter to dispense their supplies and cargo. While MPF vessels are designed to operate independently of ports and airfields for short periods of time, they are not designed to support large scale combat operations in the Indo-Pacific region without access to and reliance on advanced bases and port facilities which can affect repairs on vessels and store extensive amounts of fuel, ammunition, and other critical supplies.

Additionally, as recently as 2018, exercises demonstrated that air and surface connectors were unable to push the necessary volume of supplies and equipment ashore to support simulated combat operations.²⁰ Factors affecting the supportability of combat formations include the distance of the seabase from the shore, and thus the time required to transport material ashore, and the number of landing craft available to transport warfighting materiel from ship to a secure beach. U.S. joint doctrine recognizes the vital importance of speed and efficiency during

multinational operations. According to joint publication 4-08, *Logistics in Support of Multinational Operations*, “efficiency is directly related to the amount of resources required to deliver a specific outcome.”²¹ The U.S. Navy must find a way to overcome the problem of speed and volume in order to support forces spread over vast distances.

To operate in a maritime domain punctuated by a rising Chinese navy and long-range ballistic missiles requires ground and at-sea forces to maneuver in a distributed manner and concentrate forces to mass fires. Maneuvering in a distributed maritime environment and supporting ground forces will exacerbate an already-stretched U.S. Navy resources in the event of conflict in the Indo-Pacific region. For example, the Straits of Malacca represent a vital maritime choke point for the world’s shipping industry. A conflict in this part of the Indo-Pacific region could envision the deployment of ground forces in Indonesia to secure shipping lanes and establish sea control. As a testament to such a challenge, Indonesia comprises over 6,000 inhabited islands.²² Such a scenario would present a significant logistical challenge for the U.S. Navy.

The Department of Defense is aware of the Navy’s warfighting disadvantage in the South China Sea. In December 2020, the Department of Defense submitted a document revising the fiscal year 2022 30-year Navy shipbuilding plan that called for the U.S. Navy to grow from a desired end strength of 355 ships by 2045 to an end strength of over 400 ships.²³ However, continued funding to increase the size of the U.S. Navy is uncertain for several reasons. The coronavirus disease 2019 has resulted in a dramatic increase in the U.S. national deficit and current domestic policy issues facing a new presidential administration risk diverting funding from defense programs and resource requests. As the numerical and technological margins that traditionally favored the U.S. Navy dwindle, and the resources to support a swift maritime

response to crises in the Indo-Pacific region are lost or diverted to other priorities, allies and partnerships have increased in importance.²⁴ Lessons learned from coalition maritime operations during World War Two have bearing on the importance of improving interoperability among navies during a conflict against a peer adversary.

ABDACOM: A Historical Case for Maritime Interoperability During Conflict

Coalition warfare enables nations to share the burden of fighting, enhance the legitimacy of the operation, and increase the chances of victory by applying more resources to the war effort.²⁵ However, nations and multinational forces must be familiar and well-versed in how each nation conducts operations. Thus, it is imperative for nations that engage in coalition warfare to be interoperable. The American, British, Dutch, Australian Command (ABDACOM) during World War Two demonstrates the pitfalls of not having trained together and not having developed common standard operating procedures before engaging in combat operations.

In January 1942, Allied forces created the ABDACOM to defend the former Netherlands East Indies (now the nation of Indonesia) from Japanese expansionism, marking the first operational-level command of World War Two.²⁶ Operational for little over a month, ABDACOM was hindered by several factors that limited its operational effectiveness. First, nations were assigned areas of operation within the operational area. This strict division of areas of operation negatively affected unity of command and coordinated actions and hindered the establishment of an Allied strike force that could quickly strike at Japanese weak points as they were identified.²⁷ Second, several restrictions were placed on General Wavell, the commander of ABDACOM, which reduced his authority to coordinating actions rather than directing actions in the area of operation.²⁸ Lastly, ABDACOM was created ad hoc with little advanced planning.

The ad hoc nature of its creation led to unfamiliar tactics, techniques, and procedures; ABDACOM had to overcome these hurdles in stride while in combat against the Japanese. While allied and partner navies are able to go a long way to help the U.S. Navy overcome its deficiencies with the MPF program, ABDACOM demonstrates that the U.S. Navy must train in peacetime with other seabasing and support fleets to gain familiarity and establish command and control procedures.

The importance of developing an understanding of tactics, techniques, and procedures and common standard operating procedures remain relevant in the future operating environment. The 2018 *National Defense Strategy* recognizes the imperative to “deepen interoperability” among allies and partners by prioritizing “requests for U.S. military equipment sales, accelerating foreign partner modernization and ability to integrate with U.S. forces.”²⁹ Indeed, the last 20 years witnessed an increase in exercises designed to improve interoperability with allies and partners. However, these exercises do not sufficiently emphasize seabasing interoperability.

Multinational Exercises and Increasing Interoperability

The current Department of Defense exercise construct does not provide sufficient training opportunities for multinational forces to improve seabasing interoperability. Exercise Freedom Banner, the only annually funded MPF exercise in the Pacific, continues to be the centerpiece for the U.S. Navy and Marine Corps in MPF concept validation, doctrinal development, experimentation, and seabasing integration.³⁰ While there are several other exercises that involve the use of MPF vessels, such as Exercise Rim of the Pacific and Talisman Sabre, many of the objectives of these exercises do not include improving seabasing interoperability with

those allies and partners that participate in these exercises. For many of these exercises, the U.S. Navy and Marine Corps forces off-load equipment from MPF shipping and thus improve their ability to support operations from a seabase and off-load equipment to a beach head. However, opportunities are missed by not creating scenarios where allied navies support U.S. forces ashore with provisions from their seabased vessels. Additionally, leveraging allied landing craft to assist with off-loading material from seabased vessels builds familiarity with standard operating procedures and will improve the speed of the off-load and the volume of supplies transported ashore. In short, allied and partner landing craft can off-set the current deficiencies of MPF ships. While training opportunities must be structured to include a greater emphasis on allied seabasing integration, multinational forces reminiscent of ABDACOM require visibility of the status of supplies available to support forces ashore and afloat to enable effective command and control of multinational forces.

Importance of a Logistics Common Operating Picture

A seabasing strategy that improves interoperability with allies and partners in the region must prioritize the development of a logistics common operating picture that is compatible with allied and partner nation command and control systems. The challenges that General Waverly faced as commander of ABDACOM were anchored in the degree of command and control that the Allied force was willing to cede to the coalition commander. Indeed, the most contentious aspect of coalition warfare is command and control.³¹ Joint doctrine again provides insight into how forces are supported in multinational operations. Joint Publication 4-08, *Logistics in Support of Multinational Operations*, notes that while sustainment is a national responsibility, multinational force commanders have the responsibility for logistics in support of multinational

operations and that partner nations are encouraged to “cooperatively share the provision and use of logistics capabilities and resources to support the force effectively and efficiently.”³² The multinational force commander requires visibility and transparency of available logistics resources to plan effective logistics support to operations. However, achieving visibility and transparency is hampered due to a lack of a common logistics information system that provides real-time information to multinational forces. Thus, a stumbling block to seabasing and logistics operations in a multinational environment is the ability to share data between forces.³³ The requirement for a logistics common operating picture and the challenges of command and control of multinational forces are not unique only to the Indo-Pacific region.

As early as 2018, the North Atlantic Treaty Organization (NATO) was wrestling with the challenges associated with command and control and establishing a common operational picture in a multinational maritime environment. In June 2016, amphibious leaders from France, Italy, Netherlands, Portugal, Spain, the United Kingdom, and the U.S. convened at the inaugural Amphibious Leaders Expeditionary Symposium (ALES) to discuss a U.S.-European amphibious force to improve interoperability.ⁱ In response to the questions posed by ALES participants concerning command and control constructs for maritime operations in support of NATO, Marine Forces Europe and Africa asked the RAND Corporation to design and facilitate three events aimed at identifying suitable command and control constructs for large-scale maritime operations against a peer competitor in support of NATO.³⁴

These events highlighted several questions pertaining to how NATO and maritime forces can achieve a common operating picture with no ready answers. Indeed, while NATO seeks to “generate effective and responsive multinational logistic command and control and

ⁱ The Amphibious Leaders Expeditionary Symposium is “a forum for general and flag officers to discuss opportunities for improved interoperability, command and control, and utilization of amphibious forces within NATO.” (NATO’s Amphibious Forces, p. ix)

communications and information systems capabilities and arrangements in support of NATO operations,” no such logistics common operating picture exists to provide real-time logistics information to enable effective command and control from a seabase.³⁵ A multinational force operating in a contested EABO environment against a peer enemy needs to maximize mutual support and shared sustainment to provide maximum flexibility for the commander. A logistics common operating picture is a critical enabler of agile decision making.

Economic Statecraft to Enable Seabasing and Access

In addition to efforts to proliferate A2/AD technology in the Indo-Pacific region, China is using coercive economic statecraft as part of a larger A2/AD strategy to frustrate U.S. access in the Indo-Pacific region. Current discussions on A2/AD have driven discourse away from strategy and almost exclusively towards force structure and tactics.³⁶ An A2/AD strategy incorporates political and economic objectives, not military operations alone and that perceived weaker states can use non-kinetic means to cause the superior nation to give up the fight.³⁷ For example, the Athenians fomented a revolt within Xerxes’ borders that caused him to cease his efforts to conquer Greece. In this case, the Athenians (the weaker state) employed an A2/AD strategy using non-kinetic means (stoking unrest within Xerxes’ borders) to deny access to the Persians (the stronger state) and prevent the Persians’ conquest of Greece. China wields heavy economic weight and is able to induce nations to conform to China’s demands.

China is also competing at the strategic and operational levels through economic influence. Beijing implemented economic sanctions against South Korea’s tourism industry following its decision to allow the U.S. terminal high altitude area defense system on the peninsula.³⁸ In addition to its ability to apply economic coercion to Indo-Pacific nations, China

is employing geoeconomics that seeks to limit U.S. influence and access to infrastructure required to effectively seabase and employ MPF vessels. Robert Blackwill and Jennifer Harris, both Senior Fellows at the Council of Foreign Relations, define “geoeconomics” as “the use of economic instruments to accomplish geopolitical objectives.”³⁹ China’s Belt and Road Initiative

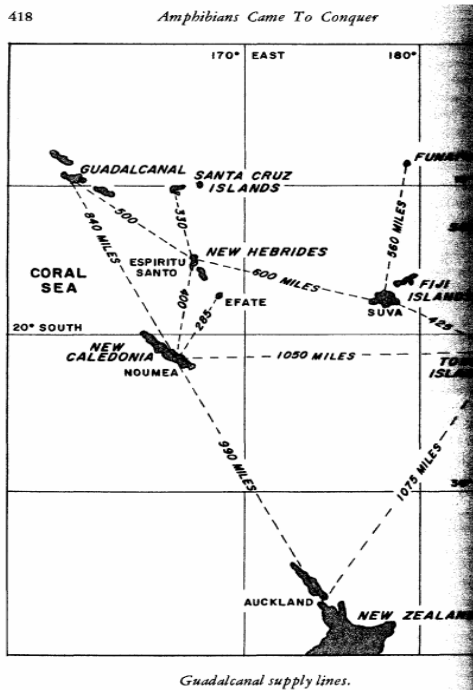


Figure 1. World War Two Advanced Base Locations
 Source: Headquarters U.S. Marine Corps, “The Amphibians Came to Conquer,” FMFRP 12-109-I.

(BRI) is an example of geoeconomics in the region:

“Launched by Xi in 2013, the BRI envisions the construction of road and sea connections between China and countries in Southeast Asia, Central Asia and through to Europe. This is to be achieved with massive investment in infrastructure, including roads, rail, airports, ports, pipelines, and communications.”⁴⁰

Through its BRI and the ‘String of Pearls’ strategy, China is focused on increasing China’s economic, military, diplomatic and political influence in the

region through port projects in Indo-Pacific nations and foreign direct investments (FDI).⁴¹ China’s maritime march across the Indo-Pacific through FDI and port

projects has eroded U.S. influence and deepened the interconnectedness between China and other Indo-Pacific nations.

While not representative of all Indo-Pacific nations, Indonesia’s relationship with the U.S. and China is not unique. Indonesia’s delicate relationship with China is marked by deep economic interconnectedness, through initiatives like the BRI, and strategic mistrust.⁴² Their tenuous relationship with China coupled with their role as founder and leader of the Non-Aligned

Movement has prevented Indonesia from developing closer ties to the U.S.⁴³ The BRI and String of Pearls strategy has also provided additional locations that allow the Chinese People's Liberation Army Navy (PLAN) to operate. For example, China has assumed ownership of the Hambantota port, which is approximately six nautical miles away from the Indian Ocean's major east-west shipping route, after Sri Lanka defaulted on its loan, providing a potential base of operations for the PLAN.⁴⁴ As China continues its strategy to increase influence and interconnectedness through port investments, the U.S. must also increase its investment in ports in the region. Allied operations during World War Two offer a strong example of the importance ports play in prosecuting a maritime campaign in the Indo-Pacific region.

The Guadalcanal campaign in 1942 highlighted the criticality of significant ports and advanced bases to support the immense supply requirements for supporting combat operations during World War Two. During the Guadalcanal campaign, the U.S. Marine Corps experienced supply challenges that stemmed from the lack of capacity at Noumea in New Caledonia, roughly 840 miles southeast of Guadalcanal. At Noumea, facilities lacked the ability to off-load and transfer equipment and at one point, there were as many as 86 ships waiting to be serviced in the Noumea harbor.⁴⁵ Planners learned from the Guadalcanal experience and began to select objectives of logistical value such as ports, harbors, sheltered anchorages, and airfields that would allow the Allied force to establish advanced bases to act as forward and supply staging points for the remainder of the Pacific campaign.⁴⁶ Figure 1 provides a visual depiction of the advanced staging bases that were established in 1942 during the Pacific campaign.⁴⁷ These advanced bases enabled the creation of an intricate network of distribution lines that increased responsiveness and speed and overcame many of the challenges experienced in the early stages of the Pacific campaign.



Figure 2. Major Ports Near C-130 and C-17 Capable Airfields

Source: Author

Today, and in a future conflict in the Indo-Pacific region, ports play a vital role in enabling a maritime campaign in the region. Not only do ports enable the buildup of combat power and the resources required, such as fuel and ammunition, to enable combat operations and the repair of damaged vessels,

off-load of equipment from U.S. Navy MPF vessels at existing port facilities “is the quickest and most efficient method [for off-load]. During a pier side offload, all vehicles are driven off the ship’s ramp and containers are lifted using the ship’s or host nation’s cranes.”⁴⁸ Papua New Guinea is an important partner and this region of the South Pacific was historically significant during World War Two. Due to their strategic location near Australia, a key ally in the region, and its distance from China, Papua New Guinea offers the U.S. Navy alternate advanced base options that remain outside of the range of China’s DF-21 ground-based anti-ship ballistic missiles. Figure 2 identifies the location of six major ports in Papua New Guinea within 25 miles of an airstrip or airport. Airstrips and airports that are located close to ports facilitate the transportation of supplies to other areas within the region and facilitate the fly-in of forces that can be embarked aboard ships. The desirable distance from port to airfield is less than 50 miles so as to shorten distances traveled between the two nodes while decreasing local area security

requirements.⁴⁹ While a complete assessment of port facilities in Papua New Guinea is beyond the scope of this paper, Table 1 provides a baseline assessment of key characteristics regarding the six ports listed in Figure 2.

| Papua New Guinea Port and Airfield Suitability for U.S. Naval Operations | | | | | | | | |
|--|--------------------|---------------------|-------------------|----------------------|-----------------|-------------------------------|-----------|------------------|
| Major Port* | Number of Berths** | Cargo Berth Depth** | Max Vessel Size** | Container Terminal** | Nearest Airport | Distance from Port to Airport | Runway*** | Runway Length*** |
| Kimbe | 3 | 18-35 feet | 500 feet | No | Hoskins | 24 miles | Paved | 5200 ft |
| Lae | 3 | 36-40 feet | Over 500 feet | No | Nadzab | 25 miles | Paved | 7900 ft |
| Madang | 3 | 10-33 feet | Over 500 feet | No | Madang | 6 miles | Paved | 5100 ft |
| Port Moresby | 4 | 10-40 feet | Over 500 feet | Yes | Jacksons | 9 miles | Paved | 9000 ft |
| Rabaul | 2 | 26-30 feet | Over 500 feet | Yes | Tokua | 25 miles | Paved | 5600 ft |
| Wewak | 3 | 21-25 feet | 500 feet | No | Boram | 2 miles | Paved | 5200 ft |

* Source: CIA World Fact Book at www.cia.gov/the-world-factbook/countries/papua-new-guinea/#introduction
**Port information pulled from www.pngports.com.pg
*** Source: www.globalsecurity.org/

Table 1. Papua New Guinea Major Port Characteristics

Source: Author

While the port facilities listed in Table 1 are capable of accommodating some U.S. Navy vessels, only three port facilities are capable of accommodating the majority of the Military Sealift Command fleet. A component of the U.S. Navy, the Military Sealift Command is “responsible for 125 civilian-crewed ships that replenish U.S. Navy ships at sea, conduct specialized missions, preposition combat cargo at sea perform a variety of support services, and move military equipment and supplies to deployed U.S. forces around the world.”⁵⁰ According to the Military Sealift Command’s 2020-2021 Handbook, the average draft of their large ocean transportation fleet, to include MPF, Combat Logistics Force, and Sealift vessels, is 35 feet.⁵¹ Of the three ports in Papua New Guinea with sufficient cargo berth depth that can support MSC’s fleet of large vessels (Port Moresby, Lae Port, and Kimbe Port), Kimbe Port cannot support the majority of MSC vessels due to the maximum size of vessels being 500 feet. Only Port Moresby and Lae Port can support vessels with drafts of 35 feet or more and vessels 500 feet or larger. The preponderance of MSC’s large ocean transportation fleet exceeds 500 feet in length.

Additionally, Port Moresby has a container yard suitable for storing off-loaded containers and cargo.

One key factor to consider regarding ports are “offload capability, such as pier space, staging areas, covered storage areas, pier width, available cranes, capacity, or MHE availability.”⁵² Container yards offer suitable staging areas and covered storage areas. While Port Moresby offers the most promising port facility, it is Papua New Guinea’s largest and most trafficked port and the government of Papua New Guinea would likely be disinclined to allow the U.S. Navy full use of its port facilities due to Port Moresby’s role in the economy. Rabaul Port offers a strong alternative to Port Moresby due to its location and characteristics.

Rabaul Port’s location and container terminal make it a viable location for an advanced naval base in the event of conflict in the region. Located on the island of New Britain in Papua New Guinea, Rabaul is located in a lightly populated region of Papua New Guinea and its port plays an important role economically to the island of New Britain, albeit a smaller economic role relative to Port Moresby. The physical characteristics and location of Rabaul provide good protection from adversary navies and favorable terrain for ground forces such as the Marine Littoral Regiment (MLR) to deploy anti-ship and anti-air defenses. Specifically, the island of New Ireland provides protection to the northeast of Rabaul and provides deployment options for anti-ship and anti-air defenses from the MLR. Compared to the location of Port Moresby and Lae Port in large urban areas, the relatively small population of Rabaul, 3,385 people lived in Rabaul in 2000, would alleviate some of the force protection requirements to protect the port facility, personnel, and war materiel staged there.⁵³ While Rabaul Port does not currently have the depth of water at the cargo berth to support the majority of the MCS’s large ocean

transportation fleet, its location and physical characteristics make it a strong candidate for investment to make it suitable for U.S. Navy use as a cooperative security location (CSL)

Industrial policy also plays an important role in a seabasing strategy that can improve EABO concepts of logistics support and distributed maritime operations in the Indo-Pacific region.⁵⁴ During the Guadalcanal campaign, the vast majority of warfighting materiel came from the shores of the U.S. over 7,000 miles away from the area of operation. Diversifying supply chains through overseas manufacturing of critical defense systems in the Indo-Pacific region will reduce the distance between the warfighter and the source of supply. For example, L3Harris, a major defense contractor, recently established a headquarters in Australia where it will “expand further into prototyping systems integration” in support of command and control systems for the Australian Defense Force.⁵⁵ Additionally, Boeing recently delivered Australia’s first unmanned jet-powered drone that uses artificial intelligence and noted that it was the first aircraft “to be designed, engineered, and manufactured in Australia in more than 50 years.”⁵⁶ Driven largely by the proliferation of long-range weapons systems and the availability of low-cost A2/AD technology, unmanned aircraft systems (UAS) provide a critical capability in the future conflict to find and fire upon an adversary first.

Recently, the Defense Innovation Unit of the Department of Defense announced the availability of five U.S.-manufactured small UAS systems to provide secure intelligence, surveillance, and reconnaissance to the U.S. Government. This initiative provided substantial funding to the approved manufacturing firms to build a robust and trusted small UAS domestic industrial base that offers alternatives to Chinese-made drone systems.⁵⁷ While domestic manufacturing of small UAS improves supply chain and manufacturing security, it creates extended distribution lines from the manufacturing source to the point of need. A network of

developed sources of supply with allies and partners in the region can provide the warfighter timely and effective sustainment for systems that will be in high demand in the next conflict with a peer or near-peer competitor.

Recommendations

For seabasing to remain a viable concept of employment in the coming decades, the U.S. must improve access to and interoperability with partners and allies. While investments in technology and modernization efforts will help improve the U.S. Navy's ability to operate from a seabase, recommendations to improve a modern seabasing concept must include a whole-of-government approach. The following recommendations will require close coordination with other instruments of national power, such as the Department of State, and are able to achieve important diplomatic, information, and economic goals.

Increase and improve training opportunities with allied and partner logistics and seabasing fleets to improve interoperability. The U.S.' allies and partners have an important role to play in off-setting the demands placed on the U.S. Navy in an EABO environment. The U.S. will need every friend and ally in a future conflict in the Indo-Pacific region and the lessons learned from ABDACOM demonstrate the importance of unity of command and mutual support. The U.S. Navy and Marine Corps should assess the current Indo-Pacific exercise construct to determine whether exercise objectives aimed at logistics interoperability to support multinational forces ashore are being achieved.

Develop a maritime logistics common operating picture that ties in current allies and partners. Along with NATO, the U.S. should invest in developing a logistics common operating picture. Global logistics awareness, a U.S. Marine Corps concept to sustain combat power in

contested environments, aims to rapidly and accurately “identify warfighter requirements, assess friendly force posture, determine available resources, and allow for dynamic and adaptive fulfillment planning.”⁵⁸ At the operational and strategic level, what is needed is total visibility of what a coalition navy has in its inventory. Coalition maritime operations during conflict require interoperable logistics automated information systems that communicate with our coalition partners and allies to maximize flexibility in determining viable sourcing solutions. Efforts to improve interoperability and develop an integrated logistics common operating picture requires nations to spend money, take risk, and cede sovereignty and would likely be viable in the long-term.

Greater use of economic statecraft and ‘geoeconomics’ to improve maritime access in the Indo-Pacific region through infrastructure investment and overseas manufacturing. The U.S. must strengthen its partnership network and seek to blunt China’s efforts to separate us from partnerships in the region. In addition to China’s BRI, “our competitors already have taken advantage of many exposed partnership nodes, especially using arms transfers such as the recent sale of Russian S-400 air defense systems to Turkey” that degrade traditional alliance interoperability arrangements.⁵⁹ As an example of efforts undertaken to strengthen traditional alliances, the U.S. is partnering with Australia and Papua New Guinea to modernize the Lombrum Naval Base in Papua New Guinea. Australia is also spending a total of \$29 million on defense projects in Papua New Guinea to counter Chinese efforts to increase and expand its influence.⁶⁰ Along with our allies in the region, the U.S. must employ economic instruments with greater intensity and frequency by pushing manufacturing of key defense systems to trustworthy and capable allies, like Australia, while investing in infrastructure development in the region to increase maritime access. Long-range precision weapons technology has made

fixed infrastructure more vulnerable. However, access to basing rights and utilization of infrastructure are important components that ensure forces have sufficient sustainment to succeed and are resilient enough to withstand distribution and supply chain disruptions due to weather, enemy action, or poor planning. The port of Rabaul in Papua New Guinea represents a viable CSL and one of many investment options that would strengthen access and improve seabasing and logistics support in the region.

The topics addressed above contain additional research opportunities that would improve upon the ideas and concepts expounded upon in this paper. First, it should be determined whether concepts of logistics in the maritime domain are being sufficiently challenged and evaluated during the wargaming process. Anecdotally, the warfighting function of logistics and sustainment is paid insufficient attention during wargaming. Realistically evaluating the concept of logistics against enemy actions and the effects of the environment provide vital feedback regarding the supportability of concepts of operation. Feedback on the concept of logistics will generate a sense of urgency to prioritize technological solutions to validated shortfalls. Second, future research should focus on technological solutions to make MPF vessels smaller, more risk worthy, and configured to support distributed operations in accordance with EABO concepts of employment. Lastly, future research efforts could identify other defense system candidates for overseas manufacturing.

Conclusion

Seabasing remains an enduring and viable concept of employment despite the challenges posed by advanced weaponry and A2/AD threats. However, much needs to be done to ensure that seabasing platforms, and maritime logistics concepts of support, can withstand the strain and

pressure of operating in a distributed EABO environment. To be sure, technological developments would alleviate some of the shortfalls in the MPF's ability to operate in a contested maritime domain. However, the current constrained fiscal environment likely precludes significant investment in such technology. To improve seabasing, the U.S. must 1) implement a seabasing strategy that increases the speed and volume of wartime materiel delivered from ship to shore through cooperation with allied and partner navies, 2) improves interoperability with allies and partners through improved training exercises and development of a logistics common operating picture, and 3) integrate economic statecraft to a greater degree to increase access and strengthen infrastructure to support seabasing in the Indo-Pacific region.

Historically, seabasing has reflected America's unwritten strategy of being capable of operating independently of allies.⁶¹ Certainly, allies and partners can be fickle and their participation and cooperation are not guaranteed. In 2003, Turkey initially denied the U.S. overflight rights as it sought to prosecute combat operations against the Taliban in Afghanistan. While there are risks associated with relying on allies and partners, the next conflict will demand that the U.S. fight shoulder-to-shoulder with its allies and partners. The U.S. can ill afford to lose access to and the competition for maritime partners in this region. Economic, diplomatic, and military instruments of national power must be integrated to maximize the effects of seabasing. In the end, "the U.S.' network of allies and partners is a strategic center of gravity, and the nation should do everything it can to ensure as many of these navies as possible are capable of integrating with U.S. forces."⁶² Expeditionary advanced base operations and the current operating environment require that foreign policy be sent back to the sea.

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