THE PHILIPPINE NAVY'S STRATEGIC SAIL PLAN 2020: A STRONG AND CREDIBLE FORCE BY 2020?



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framework of ends, ways, and means and analyze the means through the doctrine, organization,					
training, materiel, leadership and education, personnel, and facilities domains. It argues that the					
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The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

ABSTRACT

THE PHILIPPINE NAVY'S STRATEGIC SAIL PLAN 2020: A STRONG AND CREDIBLE FORCE BY 2020? by LCDR Thomas D. Luna USN, 153 pages.

The Philippine Navy (PN) has been trying to implement a Strategic Sail Plan 2020. The Strategic Sail Plan 2020 vision states that the PN will be a strong and credible Navy that the Philippines nation can be proud of by 2020. Its task is daunting. The PN is burdened with obsolescent equipment without a budget for replacements or modernization. The aspects that the PN has more control over: training, education, organization, doctrine, personnel, and good governance are emphasized in its Strategic Sail Plan Strategy Map as the way forward to achieving its mission. This study will review the efforts by the PN and analyze them under a framework of ends, ways, and means and analyze the means through the doctrine, organization, training, materiel, leadership and education, personnel, and facilities domains. It argues that the PN envisioned in the Strategic Sail Plan 2020 is not feasible while there are alternative, more affordable options that would meet the island nation's needs.

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ACRONYMS

AFP	Armed Forces of the Philippines		
ASEAN	Association of the Southeast Asian Nations		
CNLE	Center for Naval Leadership and Excellence		
DND	Department of National Defense		
DOTML-PF	Doctrine, Organization, Training, Materiel, Leadership and Education- Personnel, Facilities		
EEZ	Exclusive Economic Zone		
LPD	Landing Platform Dock		
MPAC	Multi-purpose Attack Craft		
OPV	Offshore Patrol Vessel		
PA	Philippine Army		
PLA	People's Liberation Army		
PLA-N	People's Liberation Army–Navy.		
PN	Philippine Navy		

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CHAPTER 1

INTRODUCTION

Until such time that we can upgrade our capability and modernize our Armed Forces, we cannot do anything except to file protest after protest. We do not have the capability to address this. We can only file a diplomatic protest. — Philippine Defense Secretary Voltaire Gazmin, quoted in Dona Pazaibugan, "We're too Weak to Act on Spratlys Intrusions"

The comments by the Defense Secretary of the Philippines in 2011 highlight the poor state of affairs of the Philippine Armed Forces (AFP) and especially of the Philippine Navy (PN) in May 2011. Gazmin made those remarks in Manila to news reporters' queries on the reports of Chinese military structures on six reefs in what the Philippines calls the Kalayaan Island Group, a portion of the Spratly Islands that is claimed by the Philippines. It has been decades since the AFP has been a force capable of doing more than suppressing domestic guerrilla insurgents. For the PN, the same cannot be said. They have atrophied to a low state and have only begun the process of modernization with the recent "acquisition of large second-hand American coastguard cutter as their core surface units."¹ The Philippine archipelago comprises over 7,100 islands with over 36,000 kilometers of coastline and sits at the crossroads of the South China Sea and the broader Pacific Ocean.²

¹ Michael Mulqueen, Deborah Sanders, and Ian Speller, eds,. *Small Navies: Strategy and Policy for Small Navies in War and Peace* (United Kingdom: Dorset Press, 2014), 19.

² The World Factbook, "Philippines," Central Intelligence Agency, accessed 15 December 2016, https://www.cia.gov/library/publications/the-world-factbook/geos/rp.html.



Figure 1. Map of the Philippines and West Philippine Sea

Source: Aileen S.P. Baviera, Ph.D. and Jay Batongbacal, JSD, "The West Philippine Sea: The Territorial and Maritime Jurisdiction Disputes from a Filipino Perspective. A Primer" (Asian Center for Maritime Affairs and Law of the Sea, University of the Philippines, Manila, Philippines, 15 July 2013), 8.

How did the PN decline to such a state when "In its hey-day, the Philippine Navy was considered one of the most advanced in Southeast Asia?"³ The reasons typically cited include: over-reliance and over-confidence in the Mutual Defense Treaty with the United States, a lack of public consensus in the face of near constant internal security threats, and the lack of funding for new naval acquisitions.⁴

The PN finds itself in the precarious position where its ships are doing little more than continuing to rust away while the need for a maritime capability is made ever more important in maintaining the nation's claims on the islands in the West Philippines Sea (as the Philippines calls the South China Sea). However, it was not always this way. The Philippine Naval Patrol created in 1947 in the aftermath of Philippine independence after World War II became, in 1951, the PN. At that time, the Philippines "was the only country in Southeast Asia with an operational navy composed of all naval and marine forces, combat vessels, auxiliary craft, naval aircraft, shore installations, and other supporting units."⁵ Along with the 1954 Mutual Defense Act signed with the United States, the PN "became the role model of its Asian neighbors."⁶ Although still a poor

³ Celina Cua, "Philippine Navy: Setting a Course for Greatness," ed. Marielle Antonio. Institute for Solidarity in Asia in Partnership with the Center for International Private Enterprise, Makati City, Philippines, 2015.

⁴ Koh S.L. Collin, "Philippines Navy Challenge," *The Diplomat*, 27 December 2011, accessed 15 March 2017, http://thediplomat.com/2011/12/the-philippines-navy-challenge/.

⁵ Rommel Banlaoi, *Philippine Naval Modernisation: Current State and Continuing Challenges* (Quezon City: Philippine Institute for Peace, Violence and Terrorism Research, 2012), 8.

nation recovering from the ravages of World War II, the Philippines managed to send over 7,000 men to Korea from 1950-1955 as part of five battalion combat teams of the Philippine Expeditionary Force to Korea.⁷ The PN had benefitted from receiving a readymade fleet in the drawdowns after World War II and the Philippines would discover how difficult it is to maintain such a prestigious status.

Things were to quickly change over the next 20 years. The 1970s and 1980s were marked by rapid expansion of the navies of the other South China Sea countries as many nations looked out to the sea for the resources potentially provided and the assertion of national rights. This was especially true of China as it started its naval acquisition program, quickly outpacing its neighbors in naval ship procurement and construction.

During this key time that the rest of Southeast Asia was expanding their navies, the Philippines was embroiled in domestic crises from multiple insurgent groups (primarily from their southern islands in Mindanao). The insurgent groups included a communist insurgent group and multiple Muslim separatist groups (e.g. Abu Sayyaf, the Moro Islamic Liberation Front, and the Moro National Liberation Front).

The focus on these internal threats to security and resourcing the Philippine Army to counter these threats did little to allow resourcing of the PN. The Philippines had little to fear from external threats having signed a mutual defense treaty with the United States in 1951. The real threats were from the multiple insurgencies (that are still ongoing today). Thus, while their neighbors Vietnam, Singapore, and especially China, started

⁷ Art Villasanta, "Filipino Soldiers' Story of Korean War: Valor Redus," *Philippine Daily Inquirer*, 8 July 2012, accessed 23 May 2017, http://newsinfo. inquirer.net/225235/filipino-soldiers-story-of-korean-war-valor-redux.

building up their navies, the Philippines did little in the way of modernization to try to keep up with this South China Sea naval race, but it did its best to plan for modernization. The PN established a Naval Modernization Office in 1995 and it was this organization that formulated the Philippine Naval Modernization Program in 1995, the 15-Year Strategic Development Plan in 1999, and then the 15-Year Equipment Acquisition Plan in 2005. As Banlaoi explains, "These Plans aim to purchase new naval assets and to upgrade existing ones in order to catch-up with the current phase of naval developments in the region"⁸ but those plans all fell apart as "the Asian financial crisis of that year aborted all military acquisition programs not only of the Philippines but also of the entire region."⁹

While Banlaoi asserts, "the PN only intends to develop a Navy with inshore territorial defence capability and does not intend to develop a Navy with a blue water capability" adding further that the "Philippines does not even have a plan to acquire a submarine."¹⁰ While it may be true that in 2012 the Philippines did not have a plan to acquire a submarine, other publications and articles assert that as early as 2011 the PN was seriously considering such plans. The submarine question will be further explored in subsequent sections of this study.

Reviewing the Third World naval hierarchy used by Dr. Michael Morris that classified navies on a scale of 1 through 6, with a rank 1 navy being a token navy and a

⁹ Ibid, 12.

⁸ Banlaoi, 11.

¹⁰ Ibid., 13.

rank 6 navy being a navy that is a force capable of regional power projection, the Philippines came in at a respectable rank 4, that is, a navy capable of offshore territorial defense. As late as 1980, the Philippines was enjoying the same ranking as Indonesia, Thailand and Taiwan within the Southeast Asian nations. In 1980, Vietnam and Malaysia were considered to possess a rank 3 navy, capable of inshore territorial defense. Singapore was considered a rank 2 navy, capable only of constabulary roles.¹¹

The impending decline in the PN as a rank 4 navy was already described by Morris as one whose "navy is plagued by the impending obsolescence of much of its fleet.¹² The PN would require to "renovate its fleet with imports" as the Philippine economy was limited in its naval production.¹³

¹¹ Michael Morris, *Expansion of Third-World Navies* (New York: St. Martin's Press, 1987), 34.

¹² Ibid., 266.

¹³ Ibid., 262.



Figure 2. Map of the Paracel Islands, South China Sea

Source: The World Factbook, "Paracel Islands," Central Intelligence Agency, accessed 15 May 2017, https://www.cia.gov/library/publications/the-world-factbook/geos/pf.html.

The naval buildup resulted in a huge disparity of naval forces between Southeast Asian nations by the end of the 1980s. That disparity allowed China to make its first aggressive forays into the South China Sea. In 1974, China completed its takeover of the Paracels, most of it at the expense of Vietnam. China took Money Island, Pattle Island, and Robert Island away from Vietnam by force as well as the other unoccupied islands of the Paracels claimed by Vietnam.¹⁴

¹⁴ Hayton, 76.



Figure 3. Map of the Spratly Islands, South China Sea

Source: The World Factbook, "Spratly Islands," Central Intelligence Agency, accessed 15 May 2017, https://www.cia.gov/library/publications/the-world-factbook/geos/pg.html.

In 1984, it took over Mischief Reef in the South China Sea, claimed by the Philippines, by simply building small structures on stilts and claiming them to be shelters for fishermen. The Philippines was unable to monitor, protect, or defend the area, as the PN no longer had the capability to conduct maritime patrols of these contested areas. Clearly, it no longer was a rank 4 navy capable of offshore territorial defense as Morris had claimed just a few years earlier.

Meanwhile, the Philippine government has traditionally focused on neutralizing its own internal domestic threats and have relied on the strategic partnership with the United States to assure its own sovereignty and as a counter to external foreign threats. The PN has not received adequate funding to modernize its aging fleet; it has relied on its alliance with the United States for its own external security and now finds itself in a position where it cannot protect its maritime interests. In June 2012, the inability of the PN to safeguard the Philippine maritime areas allowed the Chinese Coast Guard in conducting an effective fishing blockade to allow the exclusive use of the Scarborough Shoals fishing areas to Chinese fishermen, clearly in violation of the Philippine exclusive economic zone (EEZ). While the incident would serve as a reminder to the Philippines of its need for a strong and credible navy to protect its maritime sovereignty, it would also show the Philippines that the United States would not intervene on the Philippines' behalf in the Spratly Islands, a claim that the current administration has leveled against the United States.¹⁵ As the Philippines looks again to its maritime sovereignty, the ability of the PN to become a strong and credible force takes on a new urgency and is the basis of this study.

Purpose and Research Goals

Despite all the setbacks of the past decades, the PN had announced in November 2006 a Strategic Sail Plan 2020. The Strategic Sail Plan 2020 espoused a vision that "By 2020, we shall be a strong and credible Navy that our maritime nation can be proud of."¹⁶

¹⁵ Ian N. P. Cigaral, "Duterte: US Could Have Stopped China's Structures," *Business World*, 30 March 2017, accessed 23 May 2017, http://www.bworldonline.com/ content.php?section=Nation&title=duterte-us-could-have-stopped-china&8217sstructures&id=142993.

¹⁶ Philippine Navy Center for Naval Leadership and Excellence (CNLE), Philippine Navy Strategic Sail Plan 2020 – The Sail Plan Journey: Charting the Navy's Course for Transformation (Manila, Philippines: Center for Naval Leadership and

The purpose of this study is to research the capabilities needed by the PN while examining their mission and the threats to Philippine sovereignty.

Primary Research Question

The proposed research question seeks to answer the question: will the PN be a strong and credible Navy that the Philippines can be proud of by 2020?

Secondary Research Questions

- 1. What steps should the Philippines take to maximize the strength and credibility of its Navy between now and 2020?
- 2. If the force structure envisioned by the PN were not strong and credible for the expected internal and external threats, what would a strong and credible force consist of?

This study will first provide background on why the PN conducted and published a Strategic Sail Plan by providing some of the historical background on the PN and why it finds itself in its current state. The PN has been in serious decline since World War II. The PN has primarily an aging World War II fleet that were the remnants of U.S. naval power. The decline of the PN was accelerated with the departure of permanent U.S. basing within the Philippines in the early 1990s.¹⁷ The PN has suffered from the

Excellence), accessed 16 September 2016, http://www.cnle.navy.mil.ph/mediafiles/files/publications/pn_institutionalization_brochure.pdf.

¹⁷ David E. Sanger, "Philippines Orders U.S. to Leave Strategic Navy Base at Subic Bay," *New York Times*, December 28, 1991, accessed 23 May 2017, http://www.nytimes.com/1991/12/28/world/philippines-orders-us-to-leave-strategicnavy-base-at-subic-bay.html?pagewanted=all.

deterioration of its aging fleet, but just as important it has suffered from public distrust that accused the PN officers and senior civilian leadership of squandering precious and few resources on a fleet unable to meet its mission of protecting the Philippine archipelago.

The PN's Strategic Sail Plan 2020's stated mission is to organize, train, equip, maintain, develop, and deploy forces for prompt and sustained naval and maritime operations to accomplish the AFP mission. Its vision is stated as: "By 2020, we shall be a strong and credible Navy that our maritime nation can be proud of."¹⁸ In support of this, the PN laid out a Strategy Map that outlines goals and end-states for its personnel, organization, resources, capability, and accomplishment with the mission responsiveness, maritime security, and maritime prosperity areas (see figure 4).

¹⁸ CNLE, Philippine Navy Strategic Sail Plan 2020.



Figure 4. The Philippines Navy Strategic Sail Plan 2020

Source: Philippine Navy Center for Naval Leadership and Excellence, *Philippine Navy Strategic Sail Plan 2020 – The Sail Plan Journey: Charting the Navy's Course for Transformation* (Manila, Philippines: Center for Naval Leadership and Excellence), accessed 16 September 2016, http://www.cnle.navy.mil.ph/mediafiles/ files/publications/ pn_institutionalization_brochure.pdf. Notice that this Sail Plan does not specifically state the force structure desired, this is instead addressed in a separate navy desired force mix.

In 2012, the PN outlined its desired force structure in a Philippine Fleet Desired Force Mix that "calls for the acquisition within a 15-year-period of six frigates configured for anti-air warfare, 12 corvettes designed for anti-submarine warfare; 18 offshore patrol vessels (OPVs) that will compose the backbone for naval patrol."¹⁹ Recognizing that its desired force structure is not achievable by 2020, the 15-year acquisition plan presented by the PN is a \$500 billion Philippine peso (~\$10 billion USD) program to acquire six frigates, 12 corvettes, 18 OPV, 26 helicopters, 42 multi-purpose craft (MPAC), and three diesel submarines.²⁰ It is this force mix that will form the basis of this study although "the original plan called for the procurement of up to 6 frigates, 12 corvettes, 18 off-shore patrol vessels, 5 landing platform dock (LPD) ships, and 6 submarines."²¹ These plans "consist broadly of three 'horizons,' with each horizon progressively more ambitious, but in all their variations, these plans have been hindered by "chronic budgetary constraints" and the "target to operate this fleet of assets by 2020

¹⁹ Jaime Laude, "Philippine Navy Needs P500B to Upgrade War Capability," *Philstar Global*, accessed 21 May 2017, http://www.philstar.com/breaking-news/809955/philippine-navy-needs-p500b-upgrade-war-capability.

²⁰ Renato Cruz De Castro, "The Philippines Discovers its Maritime Domain: The Aquino Administration's Shift in Strategic Focus from Internal to Maritime Security," *Asian Security* 12, no. 2 (2016): 120.

²¹ Ridzwan Rahmat, "Shifting fortunes: the Philippine Navy's Latest Spate of Modernisation Efforts Hangs in the Balance," *Jane's Navy International*, accessed 24 March 2017, http://janes.ihs.com.lumen.cgsccarl.com/Janes/Display/jni78013-jni-2017, 3.

will not come to fruition."²² A graphic of the most recent published variation, an updated Desired Force Mix 2015 is presented in figure 5.



Figure 5. The PN Desired Forced Mix

Source: LCDR Michael J. Volante, PN, "A Memory of the Past: Full Throttle for PN Modernization," *Philippine Navy Today*, posted 18 December 2015, accessed 15 March 2017, https://web.archive.org/web/20160119215549/http://www.navy.mil.ph/news.php?news_id=1623.

²² Rahmat, 3.

Assumptions

This study will assume that the current and future administrations will continue to develop and modernize the PN as outlined in its Strategic Sail Plan 2020 and procure the desired force structure from the 2012 Philippine Desired Force Mix as outlined above: six frigates, 12 corvettes, 18 OPV, 26 helicopters, 42 MPAC, and three diesel submarines. While the plans themselves have and will likely change as individual items are shifted from one acquisition horizon to another due to Philippine budget constraints or as equipment is "replaced . . . with equipment geared for primarily internal security."²³ This study will assume that the Philippine government will continue to increase spending on its defense budget based on recent budget expenditures. This study will also assume that the Philippines and the United States will continue its strategic partnership and the Mutual Defense Treaty of 1951. The current administration, specifically President Rodrigo Duterte, publicly stated on 26 October that he wishes all foreign troops to depart the country within two years. Despite the sentiments of the president, this study will assume that the Enhanced Defense Cooperation Agreement of 2014 will continue but recognizes that some aspects of training with the United States may change during the current six-year term of the Duterte administration.

Scope

The overall goal of this study is to review open source articles, announcements, and publications about the modernization efforts of the PN and how it relates to the overall strategic picture for the maritime defense of the Philippines. This study will

²³ De Castro.

review the current force structure of the PN and the efforts to modernize it, using the reference material found on *Jane's Fighting Ships* and *Military Periscope*. This study will review the assessments by Jane's on the Philippine military spending and evaluate the trends to determine a plausible timeframe for the completion of the PN acquisition program. There are multiple articles that consider the challenges facing the PN in its efforts to modernize, and these will be reviewed extensively in order to review the possible doctrine, organization, training, materiel, leadership and education, personnel, and facilities change recommendations to make the PN a "strong and credible force."²⁴

Limitations

This research is limited to open source literature. Classified material will not be included. Literature in the Tagalog (Filipino) and Spanish language will not be used, only English translations.

There are abundant articles on the issues relating to the growing conflict in the South China Sea, of these, only those that pertain to the Philippines will be closely examined, while other such articles on the subject of the South China Sea will be reviewed for completing a thorough understanding of the conflict. The PN force structure will be evaluated based on its current composition and based on projected acquisitions as of May 2017. This will allow a review of a time that saw the transfer of the third and final Hamilton Class U.S. Coast Guard cutter to the PN, as well as the procurement or signed agreement for the transfer/purchase of multiple Korean and Japanese naval vessels that will significantly increase the maritime capabilities of the PN. This study will also be

²⁴ CNLE, *Philippine Navy Strategic Sail Plan 2020.*

limited by a lack of access to PN doctrine and tactics. This study will make assumptions on what it will consider as reasonable and credible doctrine and tactics for the PN based on open-source articles on the topic.

Delimitations

This study will observe the constraint of reviewing the time up to the current President Duterte administration commencing in July 2016 and the first nine months of his administration until May 2017. This time encompasses events important to the modernization of the PN and the AFP as well as a seeming return to an internal domestic focus in the strategic policy by the current administration. Other events include: the increasingly assertive actions by China in the South China Sea and their occupation of the Scarborough Shoals in 2013 and the March 2017 explorations off the eastern coast of the Philippines on the Benham Rise by Chinese surveillance ships, the signing of the Enhanced Defense Cooperation Agreement in 2014 between the United States and the Philippines,²⁵ the multiple actions by then President Aquino in supporting the modernization of the Philippine Armed Forces such as the signing of the Republic Act 10349 extending the AFP modernization program,²⁶ and the actions by President Duterte in seeking a closer relationship with China. President Duterte's actions include calling for

²⁵ Frances Mangosing and Matikas Santos, "What is the Enhanced Defense Cooperation Agreement and what does it mean for PH?" Inquirer.net, 28 April 2014, accessed 15 March 2017, http://newsinfo.inquirer.net/597859/what-is-the-enhanceddefense-cooperation-agreement-and-what-does-it-mean-for-ph.

²⁶ Marvin Sy, "Senate Wants AFP Procurement Eased, Speeded Up," *The Philippine Star*, 13 May 2015, accessed 15 April 2017, http://www.philstar.com/ headlines/2015/05/13/1454211/senate-wants-afp-procurement-eased-speeded.

all foreign troops, including those of the United States, to depart the Philippines within two years and canceling U.S.-Philippine bilateral training exercises.²⁷

Significance

This study will argue that the Philippines must contend with significant threats to its sovereignty. The Philippines has focused on containing and defeating domestic insurgency for the decades since World War II. However, it is clear that the Philippines must now also contend with external threats to its maritime interests. China is a rising power with global interests and will soon have a global navy to match. It appears that within the South China Sea, China seeks to rewrite the global order, claiming a historic 9dash line map of territory extending far to the shores of its neighboring countries and well within their EEZ, as is the case with the Philippines and the Scarborough Shoals. The Philippines must be prepared to defend its sovereignty and its maritime interests with a strong and credible force. This force must be able to defend Philippine maritime interests within its national borders and up to the EEZ. This force does not need to project power forward, but can benefit from operating in territorial waters. While the Philippines cannot hope to match China in defense spending budgets and sheer size of force, the Philippines can do well to review the techniques, tactics, and strategies that China has used to gain dominance and project an anti-access/area denial capability within the first island chain. Through a DOTML-PF (doctrine, organization, training, materiel, leadership and

²⁷ Sam LaGrone, "Philippine President Duterte: 'Serving Notice Now' to Cancel Future Military Exercise with the U.S." *USNI News*, 28 September 2016, accessed 15 March 2017, https://news.usni.org/2016/09/28/philippine-president-serving-notice-nowcancel-future-military-exercises-u-s.

education-personnel, facilities) review of the strategic and operating environment, can the Philippines also gain the ability to locally gain dominance within its archipelagic waters?

CHAPTER 2

LITERATURE REVIEW

Introduction

In November 2011 U.S. President Barack Obama announced to the Australian Parliament a pivot to the Asia Pacific stating, "the United States is turning our attention to the vast potential of the Asia Pacific region" adding, "As President, I have, therefore, made a deliberate and strategic decision—as a Pacific nation, the United States will play a larger and long-term role in shaping this region and its future, by upholding core principles and in close partnership with our allies and friends."²⁸ While America may have been turning its attention to the Asia Pacific in 2011, the reality is that much has been written about the strategic importance of the region well before the president's remarks.

Chapter 1 gave some of the background on the current state of the PN. What can the PN expect to do in the face of such adversity, be it the lack of a procurement budget or against such a global power as China and the People's Liberation Army – Navy (PLA-N)? Why should the Philippines care about sea power? The literature is very clear, more than most places, sea power in the Pacific matters.

²⁸ Office of the Press Secretary, "Remarks by President Obama to the Australian Parliament, Parliament House, Canberra, Australia, 17 November 2011," The White House, accessed 5 February 2017, https://obamawhitehouse.archives.gov/the-press-office/2011/11/17/remarks-president-obama-australian-parliament.

Historical Context - Sea Power in the Pacific

This study considered the following questions about sea power in the Pacific. Does sea power matter in the South China Sea, the Western Pacific, and to the Philippines? Do small navies matter when surrounded by much larger navies? The literature is a resounding yes, sea power matters—even for small navies, and it must become a priority for the Philippines. The PN must catch up to its Association of the Southeast Asian Nations (ASEAN) neighbors in capability and credibility and avoid being marginalized and outmaneuvered in their own EEZs (as is increasingly occurring). The analysis will show that the Philippines cannot hope to match China in might; it can potentially match some of its ASEAN neighbors and provide more credibility to the ASEAN coalition.

Any discussion of sea power must of course begin with the classic of sea power, Julian Corbett's *Some Principles of Maritime Strategy*. This study considers especially relevant Corbett's discussion on Methods of Disputing Command. The Philippine's neighbors will be able to exercise command of the sea and the Philippines must dispute that command. As Corbett declares, "Theory and history are at one on the point. Together they affirm that a Power too weak to win command by offensive operations may yet succeed in holding the command in dispute by assuming a general defensive attitude."²⁹ Equally important for the Philippines is Corbett's analysis that "the strongest naval Power, if faced with a coalition, may find it impossible to exert a drastic offensive anywhere without temporarily reducing its force in certain areas to a point relatively so

²⁹ Julian Corbett, *Some Principles of Maritime Strategy* (Annapolis, MD: Naval Institute Press, 1998), 209.

low as to permit of nothing higher than the defensive."³⁰ Finally, Corbett asserts, "At sea the main conception is avoiding decisive action by strategical or tactical activity, so as to keep our fleet in being till the situation develops in our favour."³¹ This study will analyze the composition of the PN proposed fleet in being and concur that it must include submarines, for although they were unproven during Corbett's time, submarines give "a new possibility to minor counter-attack."³²

Donald Macintyre's *Sea Power in the Pacific: A History from the Sixteenth Century to the Present Day* provides a concise treatise on the importance that sea power has played in the Western Pacific, from the dominance by the Western European powers during the centuries of colonization to the clash of the U.S. and Japanese navies during World War II and ending with the importance that naval power played in the Korean War. Macintyre concludes, "so long as the United States and her allies maintain a powerful maritime presence in the Far East and no oriental satellites of Russian Communism emerge there, she will refrain from a naval challenge in those parts."³³ Of note, he concludes of China that "Thus it may be seen that although China can, if she cares to expend the effort, expand the frontiers of her empire on the Asian mainland with little fear of opposition, if she wishes to expand overseas she will have to acquire a first-

³⁰ Corbett, 210.

³¹ Ibid., 211.

³² Ibid., 231.

³³ David Macintyre, *Sea Power in the Pacific: A History from the Sixteenth Century to the Present Day* (New York: Crane, Russak and Company, 1972), 260.

class navy."³⁴ As his book was written in 1972, China was just beginning to build a navy and it would be some decades before she would possess a first-class navy and start to expand her maritime borders—which she has aggressively pursued in the last decade. That naval expansion in post-World War II Third World countries (and hence much of Southeast Asia) is well documented by Michael Morris' book, *Expansion of Third-World Navies*.

Morris provides a framework for ranking the Third World navies, which this study reviewed in chapter 1 in the case of the Philippines. More broadly, his naval hierarchy consists of six ranks, with rank 1 the weakest and rank 6 navies the strongest.³⁵

³⁴ Macintyre, 260.

³⁵ Michael Morris, *Expansion of Third-World Navies* (New York: St. Martin's Press, 1987), 33.

Categories of Third World Navies	Naval/Naval Aviation Structure	Naval Capabilities	States in each Rank (alphabetic order)
6. Regional force projection navies	All Third World naval and naval aviation equipment categories strongly represented. More than 15 major warships/and or submarines.	Impressive territorial defense capabilities and some ability to project force in the adjoining ocean basin	India
5. Adjacent force projection navies	Most Third World naval and naval aviation equipment categories well represented. More than 15 major warships and/or submarines.	Impressive territorial defense capabilities and some ability to project force well offshore (beyond the EEZ).	North Korea, South Korea
4. Offshore territorial defense navies	Quite a few Third World naval and naval aviation equipment categories well represented, including some larger units at upper levels. 6-15 major warships and/or subs.	Considerable offshore territorial defense capabilities up to EEZ limits.	Colombia, Egypt, Indonesia, Libya, Mexico, Pakistan, Philippines, Taiwan, Thailand.

Table 1.Asia Third World Navy Rankings, circa 1980

Source: Created by author using data from Michael Morris, *Expansion of Third-World Navies* (New York: St. Martin's Press, 1987).

Morris details the nature of naval expansion, the influence that the United Nations

Conference on the Law of the Sea and other factors such as maritime rivalries and

disputes.³⁶ These rivalries and disputes became more pronounced with the introduction of EEZs and the large number of maritime states that suddenly find they need to delimit their maritime boundaries (especially so in the South China Sea with its multitude of overlapping claims). Morris does not consider the case of China explicitly, stating in his initial chapter that China is "a special case and is either ranked as a great power, or given a special intermediate ranking between developed and developing status. Chinese military power, including naval power, is greater than that of any other third-world state but its navy shares a coastal defence—or maritime territorial defence—orientation with them."37 However, as reaffirmed in the Corbett series Small Navies edited by Mulqueen, Sanders and Speller, he does conclude that Third World navies are "distinctive" and are likely to remain so. These navies (true of the Philippines) have the distinct characteristics of: "impaired efficiency, constricted resources, resentment to political subordination and dependency."³⁸ Especially true of the Philippines is that "weakness and poverty coupled with a desire to improve national status and popular welfare set harsh material restraints on the growth of naval power."³⁹ While Morris states "It might be argued that young navies are likely to be distinctive but that as they mature they will come to resemble the established navies of the industrialised states, and the mature navies may well encourage

- ³⁷ Ibid., 3.
- ³⁸ Ibid., 270.

³⁹ Ibid.

³⁶ Morris, 10.

young ones to grow up in their image by example and close ties."⁴⁰ This seems to be a common perception about Third World navies, that they are simply young navies that will "grow up" to be like First World navies, but Morris does admit that "it would be wrong to forget that these share characteristics of all navies have their own Third-World' peculiarities."⁴¹ Such is the case with the Philippines, for as Morris states about Third World navies, "as compared with the naval roles of developed states, Third-World constabulary/regulatory roles generally entail greater involvement in national economic, political and social life."⁴² This study will agree with the assertions by Mulqueen, Sanders, and Speller that Third World navies, being small navies, are different from their older, more powerful First-World brethren, and that they are not just "younger versions" of them waiting to grow up.

Finally, two conclusions that Morris states about Third World navies are true for the Philippines. First is that the "armies and air forces are generally needed to maintain domestic order whereas the irrelevance of navies in this context has made them appear as somewhat less pressing national priority to many national policy-makers."⁴³ This has been very obviously the case for the Philippines, even when a strong navy would have done much to assist the army's action against insurgents by securing the border and preventing the smuggling of weapons and drugs that support those insurgents.

- ⁴² Ibid.
- ⁴³ Ibid., 272.

⁴⁰ Morris, 271.

⁴¹ Ibid.
Second, and related, is that "the capital intensive nature of naval expansion . . . has reinforced the tendency to neglect naval development. Thus whereas developing an army is almost a natural progression for most states, even when not faced by any great external threat, there are strong material and psychological factors inhibiting naval development."⁴⁴ Again, Morris' general observations for Third World nations are seen to be true for the Philippines.

While Morris held China as a special case and did not include China in his analysis, this is not the case for Geoffrey Till's book that provides an in-depth analysis of the China's maritime expansion. Till's book provides much of the context for analyzing China's maritime ambitions and the reasoning for the assertion that China now poses a strategic threat to the maritime interests of the Philippines.

In Geoffrey Till's *Asia's Naval Expansion: An Arms Race in the Making?* the author "analyzes the naval expansion of the four major Asia-Pacific powers—the US, China, India, and Japan."⁴⁵ In his introduction, Till confirms Morris' assertions that "Economic growth has swelled defence budgets and navies have claimed a growing share of national expenditure to acquire new vessels and capabilities" especially in Northeast Asia by China, Japan and Republic of Korea.⁴⁶

⁴⁴ Morris, 273.

⁴⁵ Geoffrey Till, *Asia's Naval Expansion. An Arms Race in the Making?* (London: Arundel House The International Institute for Strategic Studies, 2012), back cover.

⁴⁶ Ibid., 11.

Similarly, in Southeast Asia, the "acquisition of submarines and modern frigates" also suggests behavior of an arms race.⁴⁷ Till states that "the modernization of Asian naval forces began in the 1980s as part of a growth in its share of global defence expenditure from 11% in the mid-1980s to 20% in 1995, with a corresponding leap in the region's arms imports"⁴⁸ did not end until the Asian financial crisis of 1997. The modernization program was an effort to "replace obsolescent second-hand equipment acquired decades before" but was not a "potentially destabilizing naval arms race."⁴⁹ This modernization effort continued after the financial crisis, particularly so for China and from 2000-2012 its overall fleet doubled in size (by tonnage) and its submarine fleet increased by about 30 percent (by tonnage).⁵⁰

Why all the acquisition and production of naval units? China has "since the mid-2000s expressed concern over its so-called 'Malacca Dilemma,' whereby a vast majority of its imported energy resources passes through the narrow straits of Southeast Asia, primarily the Malacca Strait."⁵¹ Increasingly, one hears that China is a global power and thus requires a global navy, but it cannot rely on external support thus promoting its own internal production. China has a "desire for independence of strategic decision and for

- ⁴⁹ Ibid.
- ⁵⁰ Ibid., 34.
- ⁵¹ Ibid., 37.

⁴⁷ Ibid., 12.

⁴⁸ Ibid., 31.

reduced reliance on foreign defense suppliers, whose record is distinctly spotty in terms of quality, cost and reliability."⁵²

As mentioned in Morris' book, small navies can suffer from relying on outside defense suppliers—China has sought to avoid this dilemma and continues to build up its domestic capacity. The domestic capacity of the China Shipbuilding Trading Company has increased since 1982 from 27 shipyards and 66 manufacturing plants to become the sole provider for over a dozen Chinese naval platforms and exports ships of all types to 52 countries.⁵³ The China Shipbuilding Trading Company has a vast ship export business that dwarfs its unit production for the PLA-N and its "continued economic success depends on the overall prosperity and stability of the international system."⁵⁴ While this might seem to "mitigate any competitive build-up of arms within the region" Till also notes that "military delegates to China's National Congress in 2007 argues: 'if a country failed to establish an independent and powerful system for military industrial development and the army did not completely operate under an independent military equipment and logistics service system, then that country's army cannot be regarded as a strong army, and the military power of the country cannot be further enhanced'."⁵⁵

What is China building and why? Till argues that "one of the best ways to gauge such intent is to view the missions for which the naval platforms are intended: are

⁵⁴ Ibid.

⁵² Till, 41.

⁵³ Ibid., 40.

⁵⁵ Ibid., 41.

regional navies developing forces designed solely to control the sea and project power for aggressive purposes, or are the capabilities designed to work with other navies in protecting public goods such as maritime security?"⁵⁶

In 2011, China's defense budget was 89.8 billion USD. The China defense budget dwarfs her neighbors in Asia with Japan the nearest in spending at 58.4 billion USD, but this is still dwarfed by the U.S. defense budget of 739.3 billion USD. China's 2011 naval sub-surface fleet consisted of four ballistic missile submarines, four nuclear powered attack submarines, and 18 conventionally powered submarines. China's 2011 surface fleet had one aircraft carrier, two cruisers, 15 destroyers, 62 frigates, and two LPD amphibious ships.⁵⁷

In 2016, that defense budget had grown to \$145 BN US, more than 3.5 times than Japan.⁵⁸ China's 2016 naval sub-surface fleet consisted of (still) four ballistic missile submarines, five nuclear powered attack submarines (increase by one), and 47 conventionally powered submarines (an increase of 29 units). The large increase was mostly due to the addition of 12 domestically built Song class submarines and 12 domestically built (and newer) Yuan class submarines. China's 2016 surface fleet still has one aircraft carrier (with one in production domestically), 21 destroyers (increase by

⁵⁶ Ibid., 58.

⁵⁷ Till, appendix figures 1 and 2.

⁵⁸ International Institute of Strategic Studies, "Asia," in *The Military Balance* 2017 (New York: Routledge, 2017), accessed 14 February 2017, http://www.tandfonline.com/loi/tmib20, 246.

six units), 57 frigates (a decrease of five), 27 corvettes, and four LPD amphibious ships.⁵⁹ Additionally, in 2013, "four of China's maritime law-enforcement agencies were unified and renamed the China Coast Guard" and now consists of over 462 patrol and coastal combatants.⁶⁰

As Till explains, "The Chinese Navy's focus on the procurement of submarines is entirely consistent with a strategy of sea denial intended to defend the maritime approaches to China against intruding naval forces bent on attacking the mainland. It is also seen as evidence of a desire to deter external intervention in any future conflict with, or over, Taiwan."⁶¹ This study would expand that assessment and argue that China's desire to deter external intervention includes the Spratly Islands and the Scarborough Shoal as they lay within the first island chain south of Taiwan.

The Chinese surface fleet has improved dramatically in key mission areas such as area air defense for its destroyers of indigenous production that come equipped with new surface to air missile systems and new anti-ship missile systems that have a longer range and higher speed than their U.S. counterparts do.⁶² These ships "would put some key American assets at significant risk, at least within the first-island chain, and so help deter the Americans from aggressive action."⁶³ Of course, these capabilities allow China to

- ⁶¹ Till, 88.
- ⁶² Ibid., 89.

⁶³ Ibid.

⁵⁹ Ibid., 281-283.

⁶⁰ Ibid., 287.

protect its citizens abroad, for example in Libya in 2011, and "illustrated the extent to which China's increasing exposure to the world economy will require the development of more global naval capacities and will have increased worries, especially in India, about the longer-term future."⁶⁴ It is clear that China is building the capacity and the capability to exercise sea control over the seas up to the first island chain and as Till concludes "Sea-control is critical to future relationships in the Western Pacific because of the centrality of the importance, as ever, of secure supplies of energy resources and raw materials, and unimpeded access to distant markets, to the economic development and social stability of all four countries, and for regime survival as far as China is concerned."⁶⁵

Lastly, Till's commentary on maritime-security capabilities must be mentioned because of the sheer might and numbers now involved in China's Coast Guard. As the Office of Naval Intelligence 2015 publication, "The PLA Navy: New Capabilities and Missions for the 21st Century," in 2013, China re-organized four of the five Maritime Law Enforcement agencies into a single China Coast Guard and "the consolidation allows the China Coast Guard to more flexibly deploy patrol ships in response to sovereignty challenges and more easily maintain presence in regional hotspots."⁶⁶ Figure 6 shows the disparity in forces between China and the rest of key Asian coast guards.

⁶⁵ Ibid.

⁶⁴ Ibid., 106.

⁶⁶ Office of Naval Intelligence, "The PLA Navy: New Capabilities and Missions for the 21st Century," U.S. Navy, accessed 16 May 2017, www.oni.navy.mil, 45.



Figure 6. Comparison of Coast Guard Assets in Asia

Source: Office of Naval Intelligence, "The PLA Navy: New Capabilities and Missions for the 21st Century," U.S. Navy, accessed 16 May 2017, www.oni.navy.mil, 45.

In 2012, at the time of Till's writing, the Chinese Marine Surveillance Agency's major expansion of the constabulary and survey fleet was in progress. Till states that "this investment in constabulary forces intended to maintain good order at sea would seem more benign and cooperative than the PLA-N's development plans. This depends on how

these paramilitary forces are used.^{**67} He goes on to give the examples of USNS *Impeccable's* harassment by Chinese Marine Surveillance Agency ships. Not mentioned in Till's book (as it may have been too recent for inclusion before publication) is the April 2012 incident at Scarborough Shoal that continues to this day where these same paramilitary forces have effectively occupied the rich fishing grounds of the Scarborough Shoals and the Philippines has essentially ceded it (with the specter of PLA-N ships just over the horizon ready to render assistance to their lightly armed brothers in arms should the need arise). As Till's maritime security chapter concludes "coastal activities are a way of asserting sovereignty over offshore waters, which in the East and South China seas is much contested with China's neighbors."⁶⁸ That is exactly what the Philippines and the rest of Southeast Asia fears from China, asserting sovereignty over the entire South China Sea and their own EEZs.

Bernard Cole's 2013 Asian Maritime Strategies: Navigating Troubled Waters takes the reader "on a sailor's tour of the oceans, seas, and straits through Asia . . . carefully describes the capabilities, claims, and ambitions of all the important coastal nations."⁶⁹ While his book examines the United States, Japan, China, India, most of Southeast Asia and more, this study will only review the pertinent information on the Philippines and China. Cole cites David Alan Rosenberg in summarizing that "effective naval strategy does not result primarily from the composition of 'overarching, erudite

⁶⁷ Till, 183.

⁶⁸ Ibid., 187.

⁶⁹ Bernard Cole, *Asian Maritime Strategies: Navigating Troubled Waters* (Annapolis, MD: Naval Institute Press, 2013), back cover.

strategic theories [but from] day by day policy and program choices, backed up by thorough training and experience . . . and by a modern, multi-faceted fleet capable of swift deployment and effective employment' of naval forces."⁷⁰ In his introduction and first chapter, Cole reminds the reader of the importance of the Indo-Pacific with a discussion on the geography and the "world's most dynamic economic arena, with the most heavily traveled sea-lanes."⁷¹ His summary of the countries in the Indo-Pacific as "following the historical model of economically modernizing nations: they are modernizing their navies."⁷² He says of China that their efforts are focused "on deploying a world-class maritime force, comprising both naval and coast guard fleets."⁷³ He elaborates in his chapter on China.

In his chapter on China, Cole introduces the reader to Liu Huaqing and his role in modernizing the PLA-N. Cole describes Liu's modernization plan as a three-phase process with the PLA-N "capable of defending China's maritime security interests out to the "first island chain" by 2000, "capable of defending China's maritime security interests out to the "second island chain" by 2020, and capable of defending China's maritime security interests and "possess aircraft carriers and have the capacity to operate globally"⁷⁴ by 2050. Of the first goal, although he writes in 2013, he states that China's

- ⁷² Ibid.
- ⁷³ Ibid.
- ⁷⁴ Ibid., 97.

⁷⁰ Cole, Asian Maritime Strategies, 20.

⁷¹ Ibid., 37.

initial goal of "sea control out to the first island chain, was not realized by its target date of 2000—and indeed, one might argue, has not been realized yet."⁷⁵ Cole states however, that the real success was in "gaining the commitment of China's civilian leadership to allocate to the navy the resources needed to develop into a twenty-first century force that could deal with the country's maritime national security concerns."⁷⁶ What are those concerns?

Cole explains that in January of 2012 a civilian analyst in Beijing stated that China's naval rivals were, strategically, the U.S. Navy but "Japan was highlighted as the more immediate concern, in light of 'naval hatred stretching over 100 years, Diaoyu Islands sovereignty, maritime boundaries in the East China Sea, and the possibility of Japanese military interference in the Taiwan issue and the South China Sea'."⁷⁷ Additionally, Vietnam and the Philippines "were listed as 'local tactical opponents' and India as a 'potential blue water opponent'." Cole then briefly describes the PLAN's force structure, and concludes, "China's naval building program supports the PLA's doctrine and remains focused on littoral missions. The PLAN is only gradually adapting to new missions in distant seas."⁷⁸

Interestingly, Cole asserts, "there is little in China's decades-old program of naval modernization that would support an offensive maritime strategy. The numerical size of

⁷⁶ Ibid.

⁷⁷ Ibid., 99.

⁷⁸ Ibid., 101.

⁷⁵ Cole, Asian Maritime Strategies, 98.

the force has not increased significantly, because as new ships are commissioned, older ones are being retired." The PLAN's blue water ambitions, he concludes, it remains exactly that, an ambition for the future.⁷⁹ Cole states that, more importantly for the US, is China's anti-access and area denial capabilities to defend their coast and littorals. The anti-access and area denial concept is "viewed as a Chinese operational plan to prevent other military forces from entering a given area that Beijing believes is vital to its national security."⁸⁰ Cole states that open press Chinese writings indicate it is the area that encompasses the Yellow Sea, the East China Sea, and the South China Sea—basically all the waters up to the first island chain.⁸¹ As Cole later concludes, "On 08 July 2010, a Chinese Foreign Ministry spokesperson stated, "We resolutely oppose foreign military ships and aircraft coming to the Yellow Sea and other Chinese adjacent waters and engaging in activities that influence China's security interests. This view, combined with the aggressive action against foreign fishing craft in the South China Sea during the past decade or more and with actions against US surveillance aircraft and ships, all point toward a view of waters as 'sovereign,' or at least as of vital national security concern, far in excess of those delineated by the UNCLOS."⁸² Of course, for the many neighbors in the South China Sea, this view by China is what is driving them to expand their own navies and in some cases, (such as with Vietnam) to seek further

⁸¹ Ibid.

⁷⁹ Cole, Asian Maritime Strategies, 101.

⁸⁰ Ibid., 102.

⁸² Ibid., 108.

cooperation and ties with the United States. Cole's chapter on Southeast Asia expands on these topics.

About the Southeast Asia regional navies, Cole summarizes that "most of the region's nations are embarked in a naval modernization effort, although none of them realistically aspires to more than an increase in defensive capability. One common factor is the desire to acquire submarines, perhaps with the view that this weapons platform offers the most 'bang for the buck' for a small navy possibly confronting a much larger, modern naval force."⁸³ What does Cole say about the Philippines Navy? Well, primarily that it is "more a vision than a fleet in being."⁸⁴

Like other books on the topic, Cole briefly summarizes the "foundations of Philippine international defense" with the 1951 mutual defense treaty with the United States adding that the Philippines never had an existential foreign threat to its democracy.⁸⁵ He then briefly outlines the primary security threats of the Philippines with the domestic conflicts from communist groups, Islamic groups, and even Philippine army officer cliques. Of the PN, Cole summarizes that "the average age of the corvettes is fifty-seven, however, and the newly acquired ex-US Coast Guard cutters are more than forty years old. Even these old ships, however, represent a significant increase in force to that navy."⁸⁶ What can the Philippines do? Despite the 1951 Mutual Defense Treaty,

⁸⁵Ibid.

86 Ibid.

⁸³ Cole, Asian Maritime Strategies, 117.

⁸⁴Ibid., 125.

there is little reason to believe that the United States will defend the Philippines claims in the Spratly Islands. The PN lack of naval capability and ability to protect its maritime sovereignty claims leads Cole to conclude that:

Without this problematic US support, Manila has little hope of prevailing against Chinese, Malaysian, or Vietnamese sovereignty claims in the South China Sea. Instead, it likely will use its 2002 agreement with Beijing as a first step in accommodating Chinese demands, as the Philippine oligarchy throughout history has accommodated itself to the Spanish, the Americans, the Japanese, and again the Americans.⁸⁷

A damning prediction for the Philippines if there ever was one, and the only thing left out was for Manila to add Chinese as the third official language after Filipino and English. Cole completes his assessment of the Philippine claims in the South China Sea by stating, "While China usually is cast as the villain in the South China Sea sovereignty disputes, all the claimants, particularly Vietnam and the Philippines, press their positions uncompromisingly. Furthermore, none of the claimants has demonstrated a convincing case; indeed, to a layman who has studied the various claims, China's arguments outweigh those of at least the Philippines and Vietnam."⁸⁸ Despite his claims, and after his book was published in 2013, an International Tribunal at the Hague declared in July 2016 exactly the opposite of Cole's assertions, in that the Philippines 2013 case against China's claims in the South China Sea were found to be without historic rights and had no legal basis. To be clear, the Tribunal did not adjudicate on questions of sovereignty of the islands within the South China Sea, but the "Philippines was able to seek arbitration by focusing its case on the legal status of disputed maritime features, rather than the

⁸⁷ Cole, Asian Maritime Strategies, 126.

⁸⁸ Ibid., 188.

determination on who owns what. On these more limited terms, the Philippines obtained a sweeping victory, with the panel finding unanimously in its [Philippines] favor on almost all fifteen submissions.³⁹ China, for their part, made it clear that they considered the Tribunal itself to have no legal basis and would not abide by any of its rulings, even before the decision by the tribunal.⁹⁰ In the end, it seems that the Philippines will have a choice, either accommodate China and become another sort of colony with new overlords, or continue to seek ways to deter China and press their own maritime sovereignty claims knowing full well the risks involved in either acquiescence or defiance. Thus, the question becomes how to be strong and credible in the face of China? What sort of strategy can small navies have in war and in peace and can they make a difference? The editors Mulqueen, Sanders and Speller seem to think so, and their compilation of essays on small navies must become required reading for all Philippine naval officers.

The editors of the 2014 collection of essays, *Small Navies: Strategy and Policy for Small Navies in War and Peace* preface their book with the observation that "In the Asia-Pacific area naval power is growing, as resurgent or emergent powers attempt to utilise maritime power for their own strategic ends. Some nations in that region are perfectly happy with 'small' navies, as they know it is enough to buy into a bigger maritime strategic environment, such as the American 2007 Maritime Strategy, which put

⁸⁹ Euan Graham, "The Hague Tribunal's South China Sea Ruling: Empty Provocation or Slow-burning Influence?" Council of Councils, 18 August 2016, accessed 1 May 2017, http://www.cfr.org/councilofcouncils/global_memos/p38227.

⁹⁰ Ibid.

an emphasis on global maritime cooperation and collaboration."⁹¹ The editors elaborate in their introduction on the purpose of the collection, in that they attempt to shine a light on small navies and show that small navies can have an impact in their region and that they can and do matter. First, they define a small navy.

Commenting on Geoffrey Till's work on small navies, the book recognizes that defining a small navy is more than a matter of size and must take into account "the nature of the fleet, geographical range, function and capability, access to high-grade technology, and reputation."⁹² The ideas are especially relevant to the Philippines as it attempts to define its naval fleet of the future, as the book asks of the reader hypotheticals such as "Is a fleet of 12 vessels capable of contributing to international operations far from home really smaller than one with 18 ships able only to operate in their own EEZ?"⁹³ Equally important for the Philippines government as it attempts to modernize the Navy as well as the Air Force is for the government to "remember that one really ought not to think of navies as separate institutions by rather as one element in a state's wider maritime power. A 'small' navy backed up by a large air force devoted to maritime operations might, in reality, be less small than another force with more ships but less support from its friends in light blue."⁹⁴ All these characteristics of a navy must be evaluated in determining the size (small, medium, large) of the navy and thus its ranking against other navies.

⁹¹ Mulqueen, Sanders, and Speller, editor's preface.

⁹² Ibid., 6.

⁹³ Ibid.

⁹⁴ Ibid.

In the literature review above, Morris' navy rankings in his book, *Expansion of* Third World Navies, were reviewed. Small Navies also highlights the attempts at naval ranking by Morris, as well as others, such as, "perhaps most famously, by Eric Grove in 1990. Grove's nine-fold system of categorization focused on the size, roles, range and overall capabilities of a navy to develop a hierarchy that ranged from the major global force projection navy (complete) at the top down, and given rank 1, to constabulary navies (rank 8) and token navies (rank 9) at the bottom."95 This ranking is revisited in chapter one and the editors conclude that they will define, "a small navy is one with both 'limited means and aspirations'."96 This definition may be useful in assisting with ranking these small navies, the more important question remains, is the difference between small navies and large navies "more those of degree than of kind, that small navies face the same kind of challenges as their larger counterparts even if they are forced to seek different solutions."⁹⁷ One of the contributors, Geoffrey Till, argues that the difference between small and large navies is exactly this matter of degree, the editors make a case for the opposite, that is, that small navies are indeed special and distinctive compared to their larger brethren. Why does it matter at all? If one assumes that small navies are special and distinctive, one can then seek solutions to their challenges that are different from what a large navy would do, or avoid a solution that only tries to make the

⁹⁵ Mulqueen, Sanders, and Speller, 6.

⁹⁶ Ibid., 7.

⁹⁷ Ibid., 8.

small navy into a large navy and does not fundamentally address the challenge in question.

Mulqueen, Sanders, and Speller explain in their introduction that small navies will have unique challenges in materiel procurement, and personnel and training. Their argument that it is typically the case, "second-hand equipment provided by friends and allies will offer a shortcut towards capability"⁹⁸ but this route often offers either suboptimal equipment or dependency. Such is the case for the Philippines, with her navy receiving a large boost in capability with the arrival of the third Hamilton class US Coast Guard cutter in November 2016. As for training, often times the small navy cannot support the required amount of training and may not benefit from a strong merchant marine to draw from to boost their maritime experience. Thus, "it can be difficult to gain appropriate command experience in a navy with few ships and even the provision of sufficient sea-time may be difficult in a navy built around missile boats and fast attack craft, vessels that, by design, necessarily spend less time at sea than do larger ships."⁹⁹

The relevant chapters of review for this study are chapters 1, 2, 3, 4, 5, and 6. Briefly, chapter 1 by Eric Grove revisits the ranking of small navies; chapter 2 by Geoffrey Till asks "Are Small Navies Different?" Chapter 3 by Basil Germond reviews the hierarchy of naval forces, chapter 4 by Michael Mulqueen (one of the editors) and Terry Warburton reviews systematic innovation for small navies, chapter 5 by Mark Mellett reviews capabilities for small navies to protect national interests at and from the

⁹⁸ Mulqueen, Sanders, and Speller, 8.

⁹⁹ Ibid., 9.

sea, and chapter 6 by Michael McDevitt is especially relevant, entitled "Small Navies in Asia: the Strategic Rationale for Growth."¹⁰⁰ The rest of the book (and especially the chapters about the Republic of Korea Navy, and the Singapore Navy) are interesting reading for small navies, but this study will not use material from those chapters in the arguments presented for the PN.

Eric Grove, in chapter 1, "The Rankings of Smaller Navies Revisited," explains the definitions that he used in his 1990 book, *The Future of Sea Power*, to "produce a global naval hierarchy that would form the basis of 'some speculative remarks about the future balance of naval power."¹⁰¹ Grove's definitions include: (1) classifying as navies: "all those forces capable of exerting force at sea, not necessarily just those bureaucratically organized into a navy;" (2) concept of "force projection: implied a capacity to engage in sea control and sea denial as well as power" projection."

In his 1990 book, he ranked the Philippines Navy at a 6, offshore territorial defense Navy, with high levels of capability in operations up to about 200 miles from the shore based on sustainability offered by frigates or large corvettes.¹⁰² Now in his updated ranking, Grove considers the Philippines "is more rank seven,¹⁰³ effectively a coast

¹⁰⁰ Ibid.

¹⁰¹ Ibid., 15.

¹⁰² Ibid., 16.

¹⁰³ Eric Grove, *The Future of Sea Power* (Annapolis, MD: Naval Institute Press, 1990), 239. Grove defined the rank 7, Inshore Territorial Defence Navies as capable of coastal combat and implies missile armed fast-attack craft and sometimes a limited submarine force.

guard"¹⁰⁴ explaining that "the Philippines has come down to the constabulary category with the acquisition . . . of large second-hand American coastguard cutters (offshore patrol vessels) as their core surface units."¹⁰⁵ Grove concludes his revisiting of navy rankings by re-iterating his 1990 conclusion that he states has "certainly stood the test of time:"

Whatever the pecking order . . . sea power will still be more than a mere slogan. It will be a vital factor in the world political order. Countries will have good reason to care about what goes on at sea and they will want, within their means, to have some way of exerting some level of force there. Maritime forces will continue to absorb large amounts of resources, depending on the capacity of nation to invest in them and its perception of the various uses of the sea, military and civilian, to its overall policy. Certain countries may choose to dismantle their maritime capabilities but others will build them up to compensate. Both seaborne transport and seaborne military power projection will remain of key importance. There will be plenty of scope for the threat or use of force from the sea. Sea power, in short, has a sound and secure future.¹⁰⁶

Geoffrey Till makes his arguments in chapter 2, "Are Small Navies Different?"

that seek to answer, "whether small navies are different in kind, or merely in scale from

medium and large ones."¹⁰⁷ Till also considers the question of "whether [small navies]

are different from each other generically."¹⁰⁸ Of the distinctive problems for small navies,

he mentions the "most obvious is the extent to which small navies are often reliant on

¹⁰⁷ Mulqueen, Sanders, and Speller, 21.

¹⁰⁸ Ibid.

¹⁰⁴ Ibid., 18.

¹⁰⁵ Ibid., 19.

¹⁰⁶ Ibid/, 20.

other countries for the supply of the platforms, weapons and sensors they need."¹⁰⁹ Till specifically mentions the Philippines' requests for "technical assistance from the United States in their bid to bolster their capacity to defend national interests in the South China Sea"¹¹⁰ adding that the Philippines "has allowed its naval and coastguard forces to atrophy to an extent that most observers looking at the country's manifestly maritime nature find surprising."¹¹¹ Outside the scope of this study, but relevant, is Till's summary of the Japanese "engaged in a significant programme designed to modernise the Philippine's coastguard forces, presumably as a way of bolstering the country's capacity to defend its interests in the 'West Philippines Sea'."¹¹² The problem with such reliance on outside help is, of course, the "significant domestic political elements in both countries dislike the American connection for a variety of historic and cultural reasons."¹¹³ Till foreshadows many of the possible scenarios in his 2014 essay as the above has especially come to pass with the 2016 election of President Duterte, an outspoken critic of the United States and its history in the Philippines. Till also foreshadows two other scenarios between U.S. and Philippine relations. One is the way in which the Philippines "necessarily have their doubts about the extent to which they could rely on the United States support if the situation in the South China Sea deteriorates

- ¹¹¹ Ibid.
- ¹¹² Ibid., 22.
- ¹¹³ Ibid.

¹⁰⁹ Ibid.

¹¹⁰ Ibid., 21.

further."¹¹⁴ Till adds that the Philippines "must be aware that the American association goes down badly in China and may therefore make the situation tenser than it need be."¹¹⁵ How appropriate then, that the President Duterte has chosen to seek closer ties with China, both because of his mistrust of U.S. intentions and resolve, and because of concerns about easing tensions with China and "pursuing a foreign policy in which the Philippines would no longer follow the dictates of its treaty ally."¹¹⁶

The other scenario is the fact that the Philippines "have to expect a degree of tiresome lecturing about democracy and human rights from Washington."¹¹⁷ Quite a telling prediction, especially given the President Duterte's extrajudicial killings in his war on drugs and Washington's rebuke of his actions. Of course, such rebukes against Duterte only served to further strain the relationship between Manila and Washington, as Duterte answered a reporter asking in Davao on 5 September 2016 about Duterte's response if President Obama asked him about human rights that "You know, the Philippines is not a vassal state. We have long ceased to be a colony of the United States . . . I do not respond to anybody but to the people of the Republic of the Philippines . . . (In Filipino "Putang-

¹¹⁴ Ibid.

¹¹⁵ Ibid.

¹¹⁷ Mulqueen, Sanders, and Speller, 22.

¹¹⁶ Trisha Macas, "Despite Rhetoric: Duterte Gives Nod to PHL-US Balikatan War Games, EDCA-Lorenzana," *GMA News Online*, 7 November 2016, accessed 7 April 2017, http://www.gmanetwork.com/news/news/nation/587855/duterte-gives-nod-to-phl-us-balikatan-war-games-edca-lorenzana/story/.

ina, mumurahin kita diyan sa forum na 'yan) [Son of a bitch, I will swear at you in that forum]."¹¹⁸

Till argues that other problems that small navies will suffer from is the lack of what might be termed critical mass in that they can only operate certain platforms in small numbers, in penny packets.¹¹⁹ Such would be the case for the Philippines Navy acquisition of only three submarines (and indeed, Till uses the examples of Malaysia's two Scorpene submarines). Of this lack of critical mass, Till says that it "necessarily makes the unit cost of equipping, manning and maintaining these platforms much more expensive since the economies of scale are much harder to achieve."¹²⁰ Equally as important are the implications and difficulties for maintenance that arise.

Till argues that the "necessary refits will mean that it will be extremely difficult to extract a continuous and cost-effective capability out of such small numbers and this complicates the kind of overall mission planning that assumes such availability."¹²¹ Of course, this would be challenging even for large navies, for example, the U.S. Navy has difficulty in maintaining the three Seawolf class submarines precisely because there are so few number in the class and there is a general lack of available spare parts and many

¹²⁰ Ibid.

¹²¹ Ibid.

¹¹⁸ Official Gazette, "The 2016 State of the Nation Address" (State of the Nation Address of Rodrigo Roa Duterte, President of the Philippines to the Congress of the Philippines Session Hall of the House of Representatives, Delivered at the Batasang Pambansa Complex, Quezon City, 25 July 2016), accessed 1 September 2016, http://www.gov.ph/section/historical-papers-doents/speeches/state-of-the-nation-address/.

¹¹⁹ Mulqueen Sanders, and Speller, 23.

times one submarine in the class will cannibalize from another in order to remain operational. This, of course, means that typically at least one of the classes is in refit and supporting the other two. Till makes mention of this summarizing that "Larger navies have this problem too, of course, especially when the numbers of platforms associated with a particular capability fall to low levels."¹²² This study would argue, given the example of the Seawolf class, that even maintaining large numbers of platforms of a capability (nuclear powered submarines) is not enough, as the uniqueness of design within classes of platforms even falling within the same capability can cause a lack of operational readiness due to the low number of ready spares.

Till also comments on a "more insidious aspect" to this. Explaining how "low numbers, cuts and outsourcing damage morale and retention by reducing promotion prospects, and adversely affect sea-shore employment ratios . . . means that there are fewer people with the necessary professional experience to influence . . . policy at the national level."¹²³ Thus is comes to pass the "navy simply gets told what its policy is."¹²⁴ Again, this insidious aspect is seen occurring in the Philippines as the Secretary of Defense is usually a statesman with previous Army experience and lacks naval experience and despite the Philippines archipelagic make-up has invested so little in the upkeep of its navy.

¹²³ Ibid., 23-24.

¹²⁴ Ibid., 24.

¹²² Ibid.

Finally, Till argues his last point on small navies difficulty in providing adequate professional military education, making the case that small militaries "have to send their best and their brightest abroad, or to be satisfied with manifestly less-than-perfect solutions which do not aspire to the levels achieved by France and other NATO allies - where PME may well take twenty per cent of an officer's career."¹²⁵ Why should it matter? Well, Till explains why it matters because "over and over again, the key characteristic of naval effectiveness has been found in the quality of a navy's training."¹²⁶

Till completes his review of the challenges facing small navies by then quickly summarizing how even medium and large navies also struggle with "these kinds of pressures and problems."¹²⁷ However, he concludes, "the difference between the assets/commitments balance between small and large navies accordingly appears much more a question of degree than of kind . . . it is manifestly not a simple matter of numbers."¹²⁸ Because of this difference in kind Till proposes the revised hierarchy for the navies of Southeast Asia.¹²⁹

¹²⁶ Ibid.

¹²⁷ Ibid.

¹²⁸ Ibid.

¹²⁹ Ibid., 25.

¹²⁵ Mulqueen, Sanders, and Speller, 24.

Rank 1	Adjacent Shipping Protection	Singapore, Malaysia, Thailand
Rank 2	Offshore Territorial Defense	Indonesia, Vietnam
Rank 3	Inshore territorial Defense	Brunei, Burma
Rank 4	Constabulary	Philippines, Cambodia

Table 2.Southeast Asia Navy Rankings, circa 2014

Source: Created by author using data from Michael Mulqueen, Deborah Sanders, and Ian Speller, eds., *Small Navies: Strategy and Policy for Small Navies in War and Peace* (United Kingdom: Dorset Press, 2014).

Thus Till expands on this revised ranking system for Southeast Asia commenting that these navies are "primarily focused on the protection of their offshore estate and interests" adding that, for example, for the Philippines "the importance of the potential oil revenues and fishing catch to the Philippines economy certainly helps explain the efforts now being attached to the build-up of their naval and coastguard forces."¹³⁰ Despite all the challenges, Till concludes that small navies do matter and that even for a small navy, "a militarily skillful combination of geographic position and asymmetric technology could well make a notionally small navy (in numbers terms) disproportionately effective strategically."¹³¹ Till gives as an example the scenario of the Republican Guard of Iran arming itself with modern mines, naval missiles, and coastal submarines to give the U.S. Seventh Fleet pause "if used intelligently and resolutely in the circumstances of a

¹³⁰ Mulqueen, Sanders, and Speller, 25.

¹³¹ Ibid., 27.

distinctive 'narrow seas' environment."¹³² More relevant for this study are Till's comments on the same topic with regards to China and its Southeast Asian neighbors.

Commenting on the South China Sea:

The Vietnamese, Taiwanese and Philippine navies all know they would have no hope of prevailing, or even of surviving, against a much more powerful and implacably resolute Chinese navy. But they also know that things are not so simple. The political and economic costs of victory for the Chinese would be extremely high: such a victory would simply confirm what Beijing calls 'the China threat theory' and undermine its claim to be rising peacefully. It could spark counteractions by others that could worsen its long-term position leading to the very kind of strategic encirclement that it most worries about. Moreover all three navies know that in any such calculation, were such an extremely unlikely event ever to come to pass, PLAN campaign planners would have to keep back, or to keep safe, the bulk of their naval forces to guard against the possibility of American intervention... Vietnam with its acquisition of six Kilo submarines is plainly investing in its own version of an anti-access/ area denial strategy, presumably less in the expectation of winning than of deterring through the prospect of punishment.¹³³

Thus Till is able to provide a short synopsis for the PN of what it might aspire in terms of capabilities and strategic importance. The ASEAN member nations would do well to further their relationships of their respective navies, similar to, as Till outlines, that seen in the "closely associated Belgian and Dutch navies" and can "reasonably compensate for their smallness . . . by banding together and learning best practices from each other."¹³⁴

In chapter 3 by Basil Germond, "Small Navies in Perspective: Deconstructing the Hierarchy of Naval Forces" the author reviews the categorization and hierarchy of navies.

¹³² Ibid.

¹³³ Ibid., 28.

¹³⁴ Ibid., 29.

Germond completes a literature review of the naval rankings in various books (such as Morris 1987 book, already reviewed in this study) and compares the classification criteria used in each work. He summarizes that, whatever classification and ranking established, "the main emphasis is put on the order of battle, the geographical reach and the type of missions . . . what is important is where a navy can sail, what it can do once arrives and for how long."¹³⁵ Germond finds that small navies tend to be considered as inferior if they are not able to project power past their territorial waters and coastal defense and constabulary tasks are regarded as "less prestigious."¹³⁶ However, Germond concludes that small navies "have the possibility to overcome their 'inferiority' if they manage to integrate within multilateral naval frameworks and coalitions."¹³⁷ In this manner, small navies can do their part to "stabilise the liberal international order."¹³⁸

In summary, the authors of chapters 2 and 3 make arguments for small navies to be disproportionately effective strategically if they can carry out anti-access area denial against a stronger opponent, to compensate by banding together with other small navies (e.g. ASEAN), and to overcome their smallness by integrating within multilateral naval frameworks and coalitions. This study will argue in chapter 4 that the PN must continue to expand (or adopt if not already practicing) on these concepts in order to be a strong and credible navy.

¹³⁷ Ibid.

¹³⁸ Ibid.

¹³⁵ Ibid., 39.

¹³⁶ Ibid., 50.

The editor, Michael Mulqueen, along with Terry Warburton, authored chapter 4, "Transforming Small Navies by Systematic Innovation: A Framework for Productivity, Efficiency and Effectiveness." They argue in their chapter "systematic innovation can provide ... benefits to small navies, provided such navies can adjust their formal and informal structures to enable innovation throughout the organisation."¹³⁹ To avoid catchphrasing they define systematic innovation as "an approach to organizational management, derived from industrial economics, which promotes user, lead user and open-source problem solving models."¹⁴⁰ Why all the trouble for innovation? The authors argue, "by adopting systematic innovation, a small navy can move from being a net consumer of state resources to a producer or enabler of wealth in the interests of the state and citizens it serves."¹⁴¹ Citing economic reasons to justify that "systematic innovation, through user, lead user and open source innovation networks" can provide small navies with "a coherent framework to . . . align their mission, strategy and operational achievements to needs and skills in civil society while enhancing military capability."¹⁴² The goal being to stimulate "invention of low cost naval technologies" in order to "enhance military effectiveness."¹⁴³

¹⁴⁰ Ibid.

¹⁴¹ Ibid.

¹⁴² Ibid., 53.

¹⁴³ Ibid.

¹³⁹ Mulqueen, Sanders, and Speller, 52.

Previous chapters already commented on the vulnerability of small navies to government austerity policies and the lack of supply chains that might create economic growth at the national level (although they may be "of considerable value to the port cities concerned."¹⁴⁴ Such has been the case for the PN, which saw serious decline in the port city/American naval base of Subic Bay after the ouster of the U.S. Navy in 1991 that was prosperous so long as the Americans were resident. Additionally, these austerity measures carry risks to national security. The authors argue, "from a naval perspective, a false economy would occur if cuts to operational effectiveness ended up increasing the costs to states arising from criminality and security threats routed through the maritime domain."¹⁴⁵ This study would further argue that, in archipelagic states like the Philippines, the threat and cost from natural disasters hitting its islands accessible primarily by the maritime domain would necessarily require that a minimum of operational effectiveness would be maintained and not just for combating illegal drug trafficking, illegal fishing, piracy, and illegal immigration that cost the Philippine's government in fighting the criminality and for security within its borders.

The challenge is how to locate systematic innovation? Explaining, "innovation is very often stimulated by the innovator's dissatisfaction with that which is current," and the need to "stimulate and accelerate innovation among the many rather than the few."¹⁴⁶ Mulqueen and Warburton argue that postmodern scholarship that "seeks to destabilise

¹⁴⁴ Mulqueen, Sanders, and Speller, 54.

¹⁴⁵ Ibid., 55.

¹⁴⁶ Ibid., 56.

settled, widely accepted, and, thus, power laden knowledge"¹⁴⁷ can be used to improve the military organization in unexpected ways. Mulqueen and Warburton give as an example the military organization that "undertake unprecedented roles, are androgynous in make-up and ethos, and have a greater permeability with civilian society."¹⁴⁸ The specific example that the authors cite is that of assessing the need to separate "organisation of militaries into land, sea and air services."¹⁴⁹ This concept will be explored further in chapter 4 and 5 of this study in making recommendations for the actions that the PN can take to become strong and credible that are outside of the usual recommendations of getting more and bigger ships.

Despite the benefits that innovation may bring, the authors also recognize that it is difficult for "practitioners to move away from safe, established pathways that reflect and reproduce a 'sealed-in' military culture."¹⁵⁰ This, of course, will be part of the challenge, to convince a cash-strapped department of defense to take a chance on new and unique innovations that might not necessarily improve the efficiency or effectiveness of their forces.

Mulqueen and Warburton's intention is to "provide a conceptual framework that innovation-focused small navies can use to expand their military capabilities and/or their activities to support economic growth, scientific enquiry and social development

¹⁴⁹ Ibid.

¹⁵⁰ Ibid., 58-59.

¹⁴⁷ Ibid., 57.

¹⁴⁸ Ibid., 57-58.

including education."¹⁵¹ Realizing that there is "a focus on blue water and Mahanian traditions" that remains highly influential and thus requires any innovation framework to "conceptually address the trade-off between a small navy acting adaptively to impact on domestic economic growth through innovation and its capacity to conduct core naval activities."¹⁵²

Mulqueen and Warburton discuss some possible drawbacks, such as interservice rivalry with the army, and recognize that any changes to traditional forms of the navy "may appear . . . a significant and even threatening move away from that which the navy was established to achieve"¹⁵³ before finally moving to their chapter for systematic innovation for small navies and their recommended examples of possible actions that small navies might take.

Mulqueen and Warburton "contend that for small navies it is possible to move beyond the frequently . . . 'innovation' in popular and political discourse and instead pursue innovation as a systematic approach to making gains of efficiency."¹⁵⁴ The authors propose that small navies "reimagine the limitations of their roles at sea and ashore, better adapt to the prevailing threat environment and seize opportunities that may rest outside familiar notions of what navies should and should not do."¹⁵⁵ For example,

¹⁵² Ibid.

¹⁵⁴ Ibid., 61.

¹⁵⁵ Ibid.

¹⁵¹ Mulqueen, Sanders, and Speller, 59.

¹⁵³ Ibid., 60.

the authors argue that small navies can deploy their assets to assist entrepreneurs undertake economic activities, have naval personnel "up-skill to facilitate and generate inward and outward enterprise," have those naval assets "work collaboratively in funded research . . . [in order to] increase potential access to new technologies at lower cost."¹⁵⁶

What are the sources of innovation? Mulqueen and Warburton had already given their three sources, (user, lead user, and open-source) noting that the traditionally thought of source, that of a research and development laboratory, is not the sole source of innovation. Their first source, which must be especially harnessed by small navies, is innovation from users—that is, the sailors that exhibit the "self-reliance required of them at sea."¹⁵⁷

The other source is the lead users that "constitute the second major source of innovation."¹⁵⁸ Lead users are explained as those users that "experience needs that will become general in a marketplace, but experience them months or years earlier than the majority of the target market . . . they are typically ahead of the entire adoption curve in that they experience needs before any responsive commercial products exist."¹⁵⁹

Finally, the third source of open-source innovation, comes from the "inventor or solver of an innovation challenge . . . independent of the seeker of that invention or

¹⁵⁸ Ibid.

¹⁵⁹ Ibid., 63.

¹⁵⁶ Ibid.

¹⁵⁷ Ibid., 62.

innovation.¹⁶⁰ The authors give the examples of early computer programming collaboration by universities and of Proctor and Gamble's online Connect and Develop system. Mulqueen and Warburton argue that small navies can also undertake these processes and "become more open to change in respect of role, working practices, enabling systems and incentive structures for problem solvers.¹⁶¹

What does this all mean for small navies? The authors state, "it is worth noting a trend towards . . . networks comprising diverse actors to tackle complex networked security problems."¹⁶² That is what they are proposing small navies do, to work with "experts in policing, defence (including naval defence) and intelligence... alongside religious leaders, educationalists, social workers and so on."¹⁶³ The authors conclude the section on open source innovation by giving some examples for frameworks that small navies could use. These include: "work-shop based approaches," toolkits (design interfaces), and "go-between" organizations.¹⁶⁴

Mulqueen and Warburton conclude small navies must stay "relevant by demonstrating their ability to help tackle the most serious threats facing their countries" adding that small navies "should be closely considering ways to impact positively on

¹⁶¹ Ibid.

¹⁶² Ibid.

¹⁶³ Ibid.

¹⁶⁴ Ibid.

¹⁶⁰ Mulqueen, Sanders, and Speller, 63.

domestic economic gain."¹⁶⁵ Thus, by adopting the systematic innovation framework discussed, small navies can find ways to "be a significant actor in the economic growth of the state" and "grow in adaptive capacity."¹⁶⁶ These ideas will be explored for possible recommendations for the PN in chapter 4.

In the chapter "Adaptive Dynamic Capabilities and Innovation: The Key for Small Navies Protecting National Interests at and from the Sea," Mark Mellett looks at the specific small navy case of Ireland and makes case for the previous chapter's premise and "in a world of growing complexity new institutional arrangements and the systematic, rational, embracing of open and ecosystem-centric innovation are essential for the post-modern era."¹⁶⁷ After making the case for the "requirement for presence at sea" he also argues that "for small navies . . . the effectiveness of deployed assets is directly linked to an enhanced understanding of activity at sea."¹⁶⁸ Giving as an example of the philosophy of the need to share information the European Union's regional initiatives in the area of information sharing and cooperation has allowed the improvement of maritime domain awareness. Mellet explains how Ireland is "currently leading an initiative . . . to create a framework for cooperation centered primarily on areas such as combined naval activities, enhanced information exchange and research

¹⁶⁵ Mulqueen, Sanders, and Speller, 65.

¹⁶⁶ Ibid.

¹⁶⁷ Ibid., 67.

¹⁶⁸ Ibid., 70.

development technology and innovation."¹⁶⁹ Mellet explains that the Irish Navy was guided "down a service-delivery path" with the expectation to "operate to standards of cost, efficiency and value for money closer to those which would apply in the civilian world."¹⁷⁰ The Irish Navy "was tasked with delivering to the maximum all of the government's requirements in the maritime domain" and "by shaping its operational capability, the navy institutionalised the agility to 'swing' from one service to another or . . . simultaneously delivered a variety of services through what it described as 'multitasking'."¹⁷¹ The Irish Navy used service level agreements to "move from an inward innovative approach to a more open innovation culture" and in this way "was evolving in a balance between the requirements of government and civil society and the capability of the navy in a manner similar to that envisaged in von Clausewitz's trinity."¹⁷² Further details of the work of the Irish Navy are beyond the scope of this study but should be explored in another project as a case study for the PN, the AFP, and other Philippine maritime stakeholders to possibly emulate. For this study, suffice it to say that the author's case has been made and he has shown the use and implementation of systematic innovation within small navies to maximize their relationship with their government and civil society in a beneficial manner moves the navy from an end user of resources of the nation to an enabler and enhancer of the nation's prosperity is possible.

- ¹⁷⁰ Ibid.
- ¹⁷¹ Ibid.

¹⁷² Ibid., 72.

¹⁶⁹ Ibid., 71.

The chapter "Small Navies in Asia: The Strategic Rationale for Growth" by Michael McDevitt give us the final chapter considered for this study for its exploration of "the strategic rationale and budgetary arguments that justify the on-going modernisation and expansion of the South Korean, Vietnamese, and Australian Navies."¹⁷³ This study argues that the same case can be made for the PN, especially as its scenario most closely aligns with that of Vietnam. The author argues that the naval modernization taking place is much more than just from the "incentive" that the People's Liberation Army Navy provides.¹⁷⁴

McDevitt summarizes the strategic setting by stating, "the maritime balance of power in East Asia began to change about 16 years ago when China had the political motivation and the economic resources to address what has been a historic weakness—its vulnerability to military intervention from the sea."¹⁷⁵ The author explains that as China moves its defenses further out to sea and away from its own coastline it has created a 'security dilemma' because its own defence has "become so effective that its neighbours fear for their own security."¹⁷⁶ McDevitt explains the different force structure that the PLA-N needs for its 'counter intervention operations' (as PLA strategists have named what the United States calls its anti-access/area denial capabilities) and the different force needed for supporting United Nations missions such as counter piracy. More details of

¹⁷⁵ Ibid.

¹⁷⁶ Ibid., 82.

¹⁷³ Mulqueen, Sanders, and Speller, 81.

¹⁷⁴ Ibid.
the PLA-N's capabilities are reviewed in the Office of Naval Intelligence 2015 publication on the subject and the treatment by McDevitt is sufficient to prove his point that naval modernization in Asia is partly in response to China's growing capability.¹⁷⁷ He next makes the case for South Korea, Vietnam, and Australia. Only the author's review of the case for Vietnam will be reviewed for this study for its closer alignment to the particular scenario that the Philippines finds itself in.

McDevitt asserts, "Vietnam is focused on weapons that will improve its sea denial capabilities within 200 nautical miles of its coast."¹⁷⁸ Citing the "serious investments in its own maritime capabilities" with the acquisition of six Kilo class submarines from Russia and "four Russian built Gepard class corvettes" the author claims that Vietnam is "seeking a credible deterrent against China."¹⁷⁹ With the addition of ten fast attack craft fitted with anti-ship cruise missiles, about 20 jet aircraft capable of maritime strike, and purchasing of four more Dutch corvettes, and the Bastion Coastal Defense System (Russian system of truck mounted anti-ship cruise missiles) the author asserts that "Vietnam is putting in place a modest but capable off-shore naval force."¹⁸⁰

In his conclusion, McDevitt reminds the reader that "building and maintaining navies is expensive" and thus the "strategic rationale for a naval force has to be well

¹⁸⁰ Ibid.

¹⁷⁷ Office of Naval Intelligence, "The PLA Navy: New Capabilities and Missions for the 21st Century.

¹⁷⁸ Mulqueen, Sanders, and Speller, 88.

¹⁷⁹ Ibid., 90.

thought out and be compelling to decision makers."¹⁸¹ As has been discussed, such has been the case for the Philippines government—in that the need for a navy was not compelling to its decision makers until recently and now the Philippines finds itself much further away from the "strong and credible force" it aspires to than Vietnam that has been able to use its economic growth to "seriously focus . . . on its maritime domain."¹⁸² The author concludes, "Vietnam is expanding its maritime forces and is creating its own 'mini-area denial capability' consisting of submarines, small surface combatants and land-based aircraft all armed with anti-ship cruise missiles."¹⁸³ Again, these ideas will be explored further for the case of the PN. This study will argue, that, similar to the case for Vietnam, the Philippines must establish its own 'mini-area denial capability' and this force may potentially look similar to Vietnam's in composition. It would certainly assist in interoperability (here specifically meaning the ability to assist each other in maintenance and training) between Vietnam and the Philippines if they were to have the same Russian built assets as their core Navy units.

The 1990 book, *The Future of Sea Power*, by Eric Grove is a "concise and complete summary of modern naval developments and trends."¹⁸⁴ The six parts of Grove's book review the state of sea power and maritime strategy in the modern world, the economic uses of the sea, the weapons systems and platforms used in naval war, the

¹⁸¹ Ibid., 93.

¹⁸² Ibid.

¹⁸³ Ibid., 94.

¹⁸⁴ Grove, front flap.

evolving maritime and legal environment, navies during peace and war, and finally his conclusion on the future of sea power. Grove's book sets out to: "answer two main questions. How is sea power going to develop in the next few decades? Is it possible to develop a new theory of sea power for the future or are the old ideas still relevant, despite all the technological changes of the last century."¹⁸⁵

About sea power in the modern world, Grove explains "the fundamental fact of twentieth-century sea power is that a country's naval capability is a direct reflection of its sheer economic power in all senses and that that power inevitably reflects its control and exploitation of large land masses."¹⁸⁶ From this is drawn the conclusion that "the successful powers will be those who have the greatest industrial base."¹⁸⁷ This is a key argument that will be discussed further in chapters 4 and 5 of this study. Grove discusses the maritime strategy used during the two world wars, briefly covering the convoy system used and the concept of "fleet in being" but, more importantly for this study, explains a "coastline that gives them both naval opportunities and vulnerabilities"¹⁸⁸ and the simple access and opportunities for concealment and surprise gives "amphibious operations much of their continuing validity."¹⁸⁹ These concepts are especially relevant to an archipelagic state such as the Philippines.

- ¹⁸⁷ Ibid., 5.
- ¹⁸⁸ Ibid., 48.

¹⁸⁹ Ibid.

¹⁸⁵ Ibid., 10.

¹⁸⁶ Ibid., 4.

Grove's chapter on weapon systems is especially relevant. After reviewing the current state of naval technology, he comes to the "final form of anti-surface warfare to be considered is an old and, until recent incidents in the Gulf, often a neglected one: mining."¹⁹⁰ Saying of this type of warfare, "Mines are the least appreciated of naval weapons . . . their use is often seen as an unwelcome and rather passive and 'defensive' alternative to more 'normal' types of naval warfare."¹⁹¹ Grove continues to explain that "mines can be laid by a wide variety of platforms: aircraft and submarines as well as surface ships of all shapes and sizes."¹⁹² Grove explains that due to the "manifold drawbacks of [mine] sweeping in the modern era that mine hunting often has to be resorted to, which is always a time-consuming business."¹⁹³ Concluding "these unspectacular weapons [mines] look like retaining a considerable degree of effectiveness for sea denial for many years to come."¹⁹⁴ These concepts on mine warfare will be discussed for the Philippines case in chapters 4 and 5.

Naval rankings have been reviewed in previous works, and Grove gives his own ranking, setting a typology for navies based on Morris' book reviewed earlier in this study. Grove attempts to "go further to produce a 'global naval hierarchy' that he uses to

¹⁹² Ibid.

¹⁹³ Ibid., 72.

¹⁹⁴ Ibid.

¹⁹⁰ Grove, 70.

¹⁹¹ Ibid., 71.

form the basis of some speculative remarks on the future balance of naval power."¹⁹⁵ It is in this section that the ranks are defined with the rank 1, a major global force projection navy - complete, of which there is only the U.S. Navy, all the way down to the rank 9, token navies. In 1990, Grove still ranks the Philippines as a rank 6, offshore territorial defense navy for having "relatively high levels of capability in defensive (and constabulary) operations up to about 200 miles from their shores"¹⁹⁶ but the Philippines "just qualifies."¹⁹⁷

Historical Context - Philippines and the South China Sea

There are a multitude of articles available about the Philippines the South China Sea and China's actions in and around the Philippines. This study will review what it considers the most prominent of these writers, prominent in the sense of the amount of works on the topic they have published. The two Philippine authors that seem to stand out are Renato Cruz De Castro and Rommel C. Banlaoi. These will be reviewed in the following section of this study. Two prominent Western authors with excellent books on the topic of the South China Sea are Bill Hayton and Robert Kaplan.

For published books with a more thorough review of the South China Seas situation, the two stand-outs are (both written in 2014) Bill Hayton's *The South China Sea: The Struggle for Power in Asia* and Robert Kaplan's *Asia's Cauldron: The South China Sea and the End of a Stable Pacific.* The most important secondary source for this

¹⁹⁷ Ibid.

¹⁹⁵ Ibid., 237.

¹⁹⁶ Ibid., 239.

study is the book by Bill Hayton, The South China Sea: The Struggle for Power in Asia. It describes the South China Seas dispute and the various claims by the nations that border the South China Sea, especially the claims by China, the Philippines, and Vietnam. The author admits in his epilogue that he believes "Chinese leadership understands it can only lose from a shooting war" but that "over the coming decades, low-level confrontation will escalate into periods of diplomatic and military crisis."¹⁹⁸ Of particular interest is the author's initial chapter that explores the history of the South China Sea region and gives much evidence in debunking China's historic claim to all of the South China Sea. Hayton briefly introduces the "Out of Taiwan"¹⁹⁹ model for the roots of settlement in the South China Sea. Much more interesting is the alternate model proposed by Bill Solheim of the South China Sea settlement by the "Nusantao Maritime Trading and Communication Network" that is a "constantly communicating network" transporting information and technology in many directions."²⁰⁰ The model concludes, "the people who really discovered the islands of the South China Sea had no ethnic identity that we would recognize today and certainly no attachment to anything like a state."201

Further chapters highlight the various claims within the South China Sea. The claims cover a diverse crowd and time, everything from the Chinese historical claim

¹⁹⁸ Bill Hayton, *The South China Sea, The Struggle for Power in Asia* (New Haven, CT: Yale University Press, 2014), 269.

¹⁹⁹ Ibid., 6.

²⁰⁰ Ibid.

²⁰¹ Ibid., 8.

based on the Ming Voyages led by the eunuch admiral Zheng He²⁰² to the current People's Republic of China claims based on the occupation of islands in the Paracels and Spratlys initially made by the Republic of China. Hayton also discusses Vietnam's claims that also attempt to bridge with French claims to the same, a particularly complicated legal argument.²⁰³ Just as complicated are the claims by the Philippines, that at one spectrum consists of claims by the Sultanate of Sulu all the way to the other end to the claims by a Philippine citizen, Tomas Cloma, that occupied islands in the Spratlys in his own name and "named the territory, tautologically, as 'The Free Territory of Freedomland'."²⁰⁴ Hayton's book was lauded by the editor-in-chief of Contemporary South-East Asia as "covering all major dimensions of the dispute—historical, legal, resources, geostrategic, military—in a cogent , concise and compelling manner."²⁰⁵

The other 2014 publication on the South China Sea that seems to get much more of the fanfare is Robert Kaplan's *Asia's Cauldron: The South China Sea and the End of a Stable Pacific*. This work has a recent historical focus. Its chapters focus on the recent history and rise to power by China, Singapore, the complicated case that is Taiwan, and the "burden" on the United States that is the Philippines. The chapter on Vietnam is

- ²⁰³ Ibid., 63.
- ²⁰⁴ Ibid., 67.
- ²⁰⁵ Ibid., back cover.

²⁰² Ibid., 24.

especially interesting in its treatment of Vietnam and its conflict with China—even stating that Vietnam is the hope to push back on China in the South China Sea.²⁰⁶

More relevant to this study is Kaplan's chapter on the Philippines, "America's Colonial Burden" that summarizes the current status of the Philippines. Kaplan comments on the corruption, the lack of "Asian Dynamism" within the Philippines adding that "Perhaps no other large country in the world has seen such a political, military, and economic investment by the United States for decades on end. Perhaps nowhere else has it made so little difference."²⁰⁷ The author's views are made even more pertinent with the recent events in the Scarborough Shoals and Benham Rise and the Philippines Navy inability to protect Philippine interests in either the South China Sea or the Philippine Sea. As Kaplan summarizes the deep connections between the United States and the Philippines, especially because of events during World War II, "the country's romantic hero is not a Filipino but the protean figure of Douglas MacArthur, who in the Filipino mind rescued the country from the butchery of the Japanese occupiers."²⁰⁸ Kaplan's states his view about America's colonial burden as "Given this legacy, arguably the fate of the Philippines, and whether it eventually becomes Finlandized by China, may say more about America's trajectory as a great power than the fate of Iraq."²⁰⁹ Especially interesting is his commentary as told to him by a group of Filipino journalists on the lack

²⁰⁹ Ibid.

²⁰⁶ Robert Kaplan, *Asia's Cauldron: The South China Sea and the End of a Stable Pacific* (New York: Random House, 2014), 53.

²⁰⁷ Ibid., 120.

²⁰⁸ Ibid., 123.

of discipline "that makes them skeptical about their country's ability to sustain a strong and united front against China."²¹⁰ Thus, Kaplan concludes that for the Philippines, their only option is "to seek the patronage of the United States against China."²¹¹ A conclusion that will be seen in other works including articles by Philippine scholars such as Renato Cruz De Castro.

The review of the literature provides a wide body of knowledge for assessing the current strength and credibility of the PN, what the future force structure of the PN is likely to be, and what the strategic environment it will operate in. However, the current literature has not assessed if these efforts by the PN will achieve the aim of becoming a strong and credible force. This study will likely conclude, as asserted in the claims throughout the literature review, that the primary strategic threat to Philippine sovereignty will be the extensive claims by China within the South China Sea and the competing claims with the Philippines within this area.

Philippine Focus on Maritime Security

There are multiple articles and studies available that address the Philippine government's efforts to modernize the AFP and the concerns of maritime security. Articles such as Renato Cruz De Castro's "The Philippines Discovers its Maritime Domain: The Aquino Administration's Shift in Strategic Focus from Internal to Maritime Security" give an excellent overview of the current state of affairs of the PN and the prioritization by the Philippine government in maritime security. This article is supported

²¹⁰ Ibid., 125.

²¹¹ Ibid., 126.

by multiple articles by the Center for a New American Security, in journals such as the U.S. Naval Institute Proceedings, Military Technology, Foreign Affairs, and Center for Naval Analyses. These articles speak to the growing challenge the PN faces in its modernization program and the efforts by the Philippine government to overcome them. Most of these articles assume the primary threat to security is the external maritime threat from China and discuss the current efforts by the PN and the Philippine government to deal with that threat. De Castro's article provides a succinct background on the issues and explores possible actions the Philippines can take in the face of growing Chinese naval expansion in the South China Sea. De Castro states that in 2013, and then President Aquino "announced that his administration is pursuing the 'Philippine Navy Strategic Sail Plan 2020' to upgrade the Philippine Navy's capabilities for maritime security."²¹² He explains that the PN Strategic Sail Plan 2020 was "originally drafted in a workshop attended by 60 naval officers in early November 2006, the 98-page document provides a policy road-map to transform the PN into a strong and credible naval force capable of securing the Philippine's maritime environment."²¹³ While this is the PN's plan for modernization, the Aquino administration made multiple "official pronouncements relative to modernizing the AFP redirect the Philippine military away from asymmetric/low intensity conflicts to maritime security"²¹⁴ that includes plans to modernize the Philippine Air Force. Simple to say, not so simple to do. The

²¹² De Castro, 111.

²¹³ Ibid., 126.

²¹⁴ Ibid., 111.

pronouncements mean, as De Castro explains, that the Philippine government must provide the financial budget to the AFP for the "necessary equipment, technical training, and expertise for external defense"²¹⁵ needed to carry out this shift. It also means that the AFP "must train its officers and personnel to broaden their skills, knowledge, and capability in maritime security instead of merely discharging constabulary functions."²¹⁶ Specifically for the PN, it "must go beyond being a transport arm of the Philippine Army and become a naval force that can stand up to the security challenge posed by an expansionist China."²¹⁷

However, few articles write with as much detail about the Philippine government and the PN efforts to address the gaps in capability to counter the external maritime security threats. One article that does is by Philippine author Rommel Banlaoi.

For a detailed article on the 2012 status of the PN, including easy to read graphics showing PN end-strength, see the 2012 monograph by Rommel C. Banlaoi, "Philippine Naval Modernization: Current State and Continuing Challenges." Writing for the Philippine Institute for Peace, Violence, and Terrorism Research, Banlaoi contends, "the success of PN modernization depends largely on threat perceptions of current decisionmakers, effective mobilization of necessary financial resources, resolution of interservice rivalry, efficient procurement system and strong social acceptability."²¹⁸

²¹⁷ Ibid.

²¹⁸ Banlaoi, 4.

²¹⁵ Ibid.

²¹⁶ Ibid., 112.

Banlaoi, like many other authors, writes about the lack of capability of the PN "commensurate with the archipelagic and maritime character of the country" but then he explains what the Philippine government and the PN is trying to do about it, citing how the "PN has crafted the Philippine Naval Modernization Program (PNMP) pursuant to the implementation of the Armed Forces of the Philippines Modernization Program (AFPMP)."²¹⁹

Banlaoi writes that in 2006 the PN's Strategic Sail Plan 2020 was "formulated . . . to provide a roadmap of naval transformation and development and thereby make PN a significant symbol of national pride and effective instrument of national power."²²⁰ While it is the PN Strategic Sail Plan 2020 that receives all the media attention, with its own Facebook page hosted by the PN Center for Naval Leadership and Excellence (CNLE), there have been other plans for modernization by the PN prior to their current Strategic Sail Plan 2020. This has caused Banlaoi to conclude that the "PN is not short of plans and programs to modernize its naval forces. In fact, the Philippines has the most systematic, elaborate and legally mandated naval modernization programs in Southeast Asia."²²¹

Related to the question of acquiring submarines as part of the PN Desired Force Mix, see the Naval Postgraduate School monograph, "At Periscope Depth: Exploring Submarine Proliferation in Southeast Asia," by LT Hardy that offers a case study showing the important role that deterrence has taken for Southeast Asians nations to

- ²²⁰ Ibid.
- ²²¹ Ibid., 7.

²¹⁹ Ibid., 6.

acquire submarines. The Philippines has not acquired any submarines, but following the lead of its Southeast Asian neighbors, it decided to "research as early as 2011 to field an indigenous submarine fleet with designs on countering Chinese aggressiveness in the South China Sea."²²² Similarly, the thesis by CDR Bailey "6 Kilos: Can Vietnam Submarines Reclaim the South China Sea?"²²³ is a case study on the Vietnam's acquisition of a submarine force that the PN could use as a model in its own ambitions for a submarine force, even purchasing the same class of submarine from Russia, as the Philippines seeks closer ties to Russia for defense procurements and investments and closer ties with Vietnam for security cooperation.

Philippine Government Sources

Finally, the literature requires a review of the open source documents, speeches, programs, and plans that the Philippine government has promulgated. At the core of this review is the PN Strategic Sail Plan 2020. The Sail Plan has five strategic objectives grouped by: personnel, organization, resources, capability, and accomplishment. Recognizing that a strong and credible navy is much more difficult than simply acquiring modern naval warships (resources and capability), the Sail Plan also addresses the shortcomings inherent in ship crews that do not have experience operating in modern warships (personnel). The annual defense budgets of the Philippine government, the

²²² LT Corwin Hardy, USN, "At Periscope Depth: Exploring Submarine Proliferation in Southeast Asia" (Master's thesis, Naval Postgraduate School, Monterey, CA, 2015).

²²³ CDR Christopher Bailey, USN, "6 Kilos: Can Vietnamese Submarines Help Reclaim the South China Sea?" (Monograph, U.S. Naval War College, Newport, RI, 2013).

Defense Policy Paper of the Department of National Defense (DND), and the speeches of top Philippine government and PN officials provide the strategic and operational direction and insight of the modernization efforts of the AFP and specifically of the PN. For example, the *Internal Peace and Security Plan "Bayanihan*" signed in 2010 by then President Aquino and then Secretary of National Defense Gazmin designed to give strategic guidance to the AFP from 2011 until 2016 is overwhelmingly concerned with internal defense from insurgent/terrorist groups and of the military environment saying specifically that "The AFP continues to lack core capabilities to fully discharge its constitutional mandate as the protector of the people and the state. Given the reality that the greatest threats to national security are those threats found within the state's borders, very little priority, if any, has been given to beefing up the military's capability for ensuring the country's security from the remote possibility of external aggression."²²⁴ It will be interesting to see the next Internal Peace and Security Plan from President Duterte and its description of the military and strategic environment.

A mere two years later on 23 July 2012, the Philippine DND published a white paper, providing the strategic direction to the AFP in which it states "The DND shall ensure that the AFP acquires the appropriate capabilities in protecting the people and the state in the face of a fast changing and challenging regional environment that brings the following concerns: How claimant countries will behave in the West Philippine Sea"²²⁵

²²⁴ Secretary of National Defense, Armed Forces of the Philippines, *Internal Peace and Security Plan "Bayanihan"* (Manila, Philippines: Department of National Defense, Republic of the Philippines, 2010), accessed 18 May 2017, http://www.army.mil.ph/home/images/bayanihan.pdf, 8.

²²⁵ Philippine Department of National Defense (DND), *Philippine Defense Transformation White Paper* (Manila, Philippines: Department of National Defense, 23

and notes that regarding its relationship with the United States "in preparation for an eventual conduct of a bilateral defense of the country under the Mutual Defense Treaty (MDT) with the United States of America (USA), substantial inter-operability with the US forces must be achieved, particularly in terms of planning and execution of military operations and command and control communications."²²⁶ The white paper is quite diplomatic and never mentions China and other Southeast Asian nations are only mentioned with regards to their "opportunities among the nations involved to cooperate and collaborate in strengthening each other's defense and security forces for their mutual benefit."²²⁷

Technical Assessments

The current status of the PN (and of its armed forces) can be obtained from such websites as *Military Periscope* or the United Kingdom based Information Handling Services, Inc., known for its classic series *Jane's Fighting Ships*. *Military Periscope* states, "The Philippine Navy continues to suffer from low operational readiness rates, nearly non-existent funding for modernization and maintenance, as well as a rapidly aging fleet."²²⁸ The *Jane's Sentinel Security Assessment – Southeast Asia*, is much more

²²⁷ Ibid., 8.

July 2012), accessed 16 September 2016, http://www.dnd.gov.ph/pdf/PDT%20White%20 Paper_Final_23Jul12.pdf, 10.

²²⁶ Ibid., 20.

²²⁸ Military Periscope, "Nations/Alliances/Geographic Regions – Southeast Asia – Philippines Armed Forces Structure," accessed 1 September 2016, https://www.military periscope.com.lumen.cgsccarl.com/nations/seasia/philippi/organzn/index.htm.

detailed and much more damning in its assessment of the Philippines stating "The Armed Forces of the Philippines are struggling to emerge from what has essentially been a lost decade in terms of modernization and procurement. During this time the air force ceased to be combat effective, the navy's small and ageing fleet neared obsolescence and became restricted to a land forces support role, and the army pursued seemingly openended counterinsurgency."²²⁹ Thus, both confirm the overall inadequacy of the PN, inadequate in the number of functioning naval vessels, inadequate in the naval capabilities of the PN, and inadequate in the seaworthiness of the current fleet. Both sources also define the threat environment and the need to modernize based on the threats from insurgency, natural disasters, and the growing tension within the South China Sea.

Other Research Projects

There are several research projects by students of the U.S. Army War College, Naval Postgraduate School, U.S. Naval War College, and the U.S. Army Command and General Staff College that are closely related to the topic of this study. However, none of this deal specifically with the efforts of the PN to modernize and meet the maritime security challenges the Philippines is faced with, but deals with the current security challenge of the Philippines or their neighbors in the South China Sea.

An interesting and useful Strategy Research Project is by U.S. Army War College international fellow Col Franco Gacal, Philippine Army, titled "Territorial Disputes in Spratly: As Assessment of the Philippine Initiatives." Col Gacal discusses the South

²²⁹ Jane's, "Philippines Armed Forces," *Jane's Sentinel Security Assessment – Southeast Asia*, posted 16 August 2016, accessed 1 September 2016, http://janes.ihs.com.lumen.cgsccarl.com/SouthEastAsia/Display/1305078.

China Seas dispute and provides recommendations to "avert potential armed confrontation among concerned countries."²³⁰

A 2015 Naval Postgraduate School thesis by Commander Askari, Indonesian Navy, titled "Preventing Escalation in the South China Sea Disputed Waters: A Comparative Study of Republic of the Philippines and Socialist Republic of Vietnam addresses the challenging security environment and "highlights the importance of civilmilitary relations"²³¹ since the recent clashes by Vietnamese, Philippine and Chinese vessels in the South China Sea have been civilian vessels and not naval military vessels.

Defense Concerns for the PN

The literature review shows most scholars agree that, as *Military Periscope* summarizes, "the primary defense concern of the Philippines is from two sets of insurgents—communists based in rural Luzon, Visayas and parts of Mindanao, and a Muslim insurgency in the southern region" however, recent military modernization efforts have been in response to the challenges in the South China Sea.²³²

²³⁰ Col Franco Nemesio Gacal, "Territorial Disputes in the Spratly: An Assessment of the Philippine Initiatives" (Master's thesis, U.S. Army War College, Carlisle Barracks, PA, 2013), abstract.

²³¹ Commander Askari, "Preventing Escalation in the South China Sea Disputed Waters: A Comparative Study of the Republic of the Philippines and Socialist Republic of Vietnam" (Master's thesis, U.S. Naval Postgraduate School, Monterey, CA, 2015), abstract.

²³² Military Periscope, "Nations/Alliances/Geographic Regions – Southeast Asia – Philippines Armed Forces Structure."

One of the major threats to the Philippines is interstate conflict over the South China Sea.²³³ Jane's claims that the dispute is unlikely to escalate but commercial vessels face an elevated risk of being boarded by Chinese paramilitary vessels. Adding that the Philippine military is widely acknowledged as the least capable among its neighbors, Jane's assesses that the PN's aging warships are not sea-worthy outside inshore waters and would be unable to secure its assets and territory.²³⁴

Based on the two primary threats of domestic insurgents and the need to protect maritime interests, the PN "needs to be able to project a degree of credible naval authority in low-level economic zone protection missions."²³⁵ The PN needs small and numerous craft for operations against insurgents and needs larger surface combatants to patrol territory in the South China Sea. ²³⁶ The task for the Philippines Navy is daunting, and its focus has been on acquiring the seagoing platforms needed to protect against the two primary threats of domestic insurgents and its maritime sovereignty. This study will analyze the feasibility of the PN Desired Force Mix as they try to obtain craft for operations against insurgents and obtain larger surface combatants for protecting claims

²³⁶ Jane's, "Philippines Executive Summary."

²³³ Jane's, "Philippines Security," Jane's Sentinel Security Assessment – Southeast Asia, accessed 28 September 2016, http://janes.ihs.com.lumen.cgsccarl.com/ SouthEastAsia/Display/1305094.

²³⁴ Ibid.

²³⁵ Jane's, "Philippines Executive Summary," *Jane's Sentinel Security Assessment* – *Southeast Asia*, posted 16 August 2016, accessed 1 September 2016, http://janes.ihs.com.lumen.cgsccarl.com/SouthEastAsia/Display/1305070.

in the South China Sea. There are several articles that address the issue of what a credible force for the Philippines vis-a-vis China would look like.

One of those articles is a 2012 Center for New American Security study that proposed that the Philippines should acquire 48 F-16 fighter planes, several corvettes or frigates, and four to six midget submarines in order to have a credible force to counter the medium term threat posed by China.²³⁷ Unfortunately, the analysis will show that this type of force mix is unrealistic given the Philippine defense budget and the acquisition budget for the PN.

An alternative is by Krepinevich. In his article, "How to Deter China"²³⁸ Krepinevich gives recommendations for states along the first island chain that are not reliant on large naval combatants. He recommends that states "could buttress their ability to deny China access to airspace by employing army units equipped with highly mobile and relatively simple short-range interceptor missiles (such as the Evolved Sea Sparrow, supported by giraffe radar systems to detect targets.)"²³⁹ Additionally, states could "rely on ground forces . . . armed with mobile launchers and antiship cruise missiles, to perform the same operations [as coastal defense]" and "ground forces could contribute . . . [to] naval mine warfare . . . armed with the ability to emplace sea mines from land bases using short-range rockets, helicopters, or barges . . . ground forces could

²³⁷ Richard D. Fisher, "Defending the Philippines: Military Modernization and the Challenges Ahead," *East and South China Seas Bulletin* 3 (2012): 6.

²³⁸ Andrew Krepinevich, "How to Deter China," *Foreign Affairs* 94, no. 2 (March 2015): 78-86.

²³⁹ Ibid., 80.

make large stretches of sea off-limits to the Chinese Navy. Minefields at key chokepoints along the first island chain would greatly complicate a Chinese naval offensive and hamper China's ability to harass allied naval forces."²⁴⁰ Finally, and in the event of a land invasion and occupation of larger islands, "access to short-range, precision-guided mortars, rockets, and shoulder-fired antiaircraft missiles, for example, would maximize the lethality of small guerilla resistance units."²⁴¹ Krepinevich's recommendations speak to a broader strategy that would force the PN and the Philippine Army out of their usual missions and roles and require them to work together—for how else could the Philippine Army train for attacking ships without the help of the PN or could the PN use weapon systems traditionally used by the Army? These ideas will become key to the recommended options the PN should consider in its quest to become strong and credible by 2020.

²⁴⁰ Ibid., 81.

²⁴¹ Ibid.

CHAPTER 3

RESEARCH METHODOLOGY

Introduction

Methodology

The purpose of this chapter is to describe the methodology that will be used in this study to analyze the sources presented in chapter 2 and answer the research questions posed about the vision of the PN to be strong and credible by 2020. The research methodology used will be a qualitative analysis variation of the case study approach. The variations occur when examining cases that may be similar to the Philippines and Philippines Navy, for example, in the analysis of obtaining platforms and weapons systems similar to what Vietnam has already done. In other cases, the specific constraints imposed by the Philippine government's budget for the armed forces and the PN have been used to examine the possible platforms/weapons systems/actions that the PN (or the Philippine government) might take to achieve their strategic ends.

By using the mixed methods approach, this study will include an examination of the DOTML-PF domains (with a primary focus on the materiel domain) a review of the pertinent literature, and analysis within an ends, ways, means framework to determine the likelihood of the PN achieving their goal of being a strong and credible force by 2020 their maritime country can be proud of.

The focus will be on the strategic and operational requirements and the capabilities the PN will require based on the threat environment that was reviewed in chapter 2—the overwhelming threat posed by China in the South China Sea. This study will summarize the analysis of the PN's current ends, ways and means, and of the means

consider the doctrine, organization, training, materiel, leadership and education, personnel, and facilities solutions to the PN's desired ends. Table 3 will be used to show the current analysis of the PN's efforts. After evaluating the current state, the same table will be used to summarize an alternate proposed solution this study will recommend based on the fiscal constraints on the Philippine modernization budget and the increased importance of establishing a credible deterrence in the South China Sea as the area becomes increasingly under Chinese control. By focusing on the much publicized information available about PN and AFP acquisition priorities, this study will analyzes the efforts by the PN to be a strong and credible force by 2020.

ENDS:	Desired End States
WAYS:	
MEANS:	Resources and Capabilities from the DOTML-PF domains Doctrine: Organizations: Training: Materiel: Leadership and Education: Personnel: Facilities:

Table 3. Ends, Ways, and Means with Focus on DOTML-PF Domains

Source: Created by author.

CHAPTER 4

ANALYSIS

Introduction

Chapter 3 described the methodology that will be used to analyze the PN's Strategic Sail Plan 2020 using the DOTML-PF framework. This chapter will now use the open sources to analyze each of the DOTML-PF domains. Specifically, the analysis will review where the PN is now and what have they decided to do based on their assumptions of where they want to arrive. Chapter 2 reviewed the literature that convincingly concludes that the strategic threat that China poses to the maritime sovereignty of the Philippines must be balanced.

The literature review also indicated that scholars were evaluating the difficulties of the PN and warning of its decline to obsolescence well in time for the Philippine government to keep those predictions from becoming reality. Thus, it was no surprise when the PN Headquarters described itself in 2008 thus:

For external defence, the Navy is significantly constrained against air, surface and sub-surface threats. It cannot assure real-time reliable and secure communications. Electronic warfare capabilities are wanting in many aspects. There are serious deficiencies in the quantity and more so the quality of platforms and equipment. There are no resources for long range detection, surveillance, reconnaissance and deployment. The capability to utilize the neutralize mines still needs to be developed. The automation necessary to engage high-speed and low observable craft and weapons has not been put in place. The organization is not equipped for conventional naval warfare and needs to significantly build up its capabilities. With meagre self-defence means, PN ships are vulnerable to better-armed platforms.²⁴²

²⁴² Banlaoi, 14.

Whatever the history, the PN now finds itself fighting to implement a

modernization plan that takes into account not just the materiel problems in the lack of modern equipment, but also such things as the culture of the organization. Joint Publication 1-02, *Department of Defense Dictionary of Military and Associated Terms*, defines the acronym DOTML-PF: doctrine, organization, training, materiel, leadership and education, personnel, and facilities.²⁴³ Each of these domains is considered for possible solutions to gaps between an organization's needs and its capabilities. To summarize each of the domains: here is an example of how DOTML-PF would be interpreted in the military context:

Doctrine: the way they fight, e.g., emphasizing maneuver warfare combined airground campaigns.

Organization: how they organize to fight; divisions, air wings, Marine-Air Ground Task Forces (MAGTFs), etc.

Training: how they prepare to fight tactically; basic training to advanced individual training, various types of unit training, joint exercises, etc.

Materiel: all the "stuff" necessary to equip the forces, that is, weapons, spares, etc. so they can operate effectively.

Leadership and education: how they prepare their leaders to lead the fight from squad leader to 4-star general/admiral; professional development.

Personnel: availability of qualified people for peacetime, wartime, and various contingency operations

²⁴³ Joint Chiefs of Staff, Joint Publication 1-02, *Department of Defense Dictionary of Military and Associated Terms* (Washington, DC: Government Printing Office, 8 November 2010), accessed 22 September 2016, http://www.dtic.mil/doctrine/ dod_dictionary/.

Facilities: real property; installations and industrial facilities (e.g. government owned ammunition production facilities) that support the forces.²⁴⁴

This study will analyze the PN's efforts to fill its capabilities gap using the DOTML-PF framework. The capability gap it is trying to address is the lack of a strong and credible force to counter the external threats to Philippine maritime sovereignty, especially in the South China Sea and specifically in places like the Scarborough Shoal and the Spratly Islands, but this analysis will be in the context of what is actually possible by the PN given its acquisition budget and the limits placed on it by the lack of funds from the Philippine government.

From the Strategic Sail Plan 2020's Strategy Map, they mention the following items as their key imperatives can be placed under their respective DOTML-PF domains. The public documents made available by the PN and the Philippine CNLE provide insights that fall within the DOTML-PF domains.

²⁴⁴ ACQuipedia, "DOTmLPF-P Change Recommendation," Defense Acquisition University, accessed 21 May 2017, https://dap.dau.mil/acquipedia/Pages/ArticleDetails. aspx?aid=0f017b62-6273-4d58-b02c-d72c776198e8.

Table 4.	Current Ends, Ways, and Means from the		
PN Strategic Sail Plan 2020			

	ENDS: Mission	Responsiveness/Maritime Security	/Maritime Prosperity			
Miss	Mission: To organize, train, equip, maintain, develop, and deploy forces for prompt and sustained naval and					
	maritime o	operations to accomplish the AFP r	nission.			
WAYS:	PN Operational Units/Ships	PN Shore Based Support	Individual Sailor			
	"Optimal level of operation readiness" - Implied the PN will be able to respond with naval platforms to any mission as ordered by DND.	"Achieve a responsive naval support system" - Implied to have the underlying infrastructure that will maintain and support the expanding PN.	Implied that the PN will have motivated and trained sailors that exhibit core values of "Honor, Dedication, Patriotism, Solidarity, Leadership, and Professionalism"			
MEANS:	Resources and Capabilities from the DOTML-PF					
	Doctrine: "Develop sound and appropriate maritime doctrines" - Implied doctrine will be traditional focus to develop Mahanian or Guerre de escadre tactics: Anti-submarine warfare and Surface warfare.					
	Organizations: "Adopt a dynamic and responsive naval organization" - Implied the PN will have the operational units ready to respond to contingencies as ordered by the DND. "Achieve a responsive Naval Reserve Force" - Implied the Naval Reserve Force will be trained and ready to commit to operations as contingencies occur.					
	Training: "Develop responsive naval capabilities" - Implied training from treaty allies, partners to gain missing naval warfare capabilities such as anti-submarine, anti-air, and surface warfare once naval platforms with such capabilities are acquired.					
	Materiel: "Attain adequate financial resources" - Implied the budget to attain the desired force mix of 6 frigates, 12 ASW corvettes, 18 OPVs, 3 submarines, and 42 MPACs will be approved. "Achieve a responsive naval support system" - Implied to develop the maintenance and logistics systems to repair, replace, and maintain the ships and weapons systems the PN is acquiring as part of desired force mix. "Develop responsive naval capabilities" - Implied that the PN will be able to conduct ASW, SUW and AAW with naval platforms.					
	Leadership and Education: "Develop highly competent and motivated professionals" - Implied the CNLE Sail Plan Caravan will change the culture of the PN for the benefit of good governance and as stakeholders in the transformation of the PN.					
	Personnel: "Achieve a responsive Naval Reserve Force" - Implied that reserve sailors will be better trained and ready to respond to contingency operations when called upon. "Develop highly competent and motivated professionals" - Implied training on the warfare areas that have not been present in the PN until the acquisition of modern naval platforms.					
	Facilities: "Develop reliable naval facilities" - Implied to upgrade key ports in Palawan, develop the maintenance sites needed to support, maintain and repair the newly acquired naval platforms and weapons systems.					

Source: Created by author.

These are all broad and positive goals for the PN. Where do they stand on each of these now? Each one will be considered separately.

Doctrine

The PN's "main priority is to support internal security operations. In addition to that, we have to provide for the defence of our 200 NM EEZ."²⁴⁵ Jane's summary of the PN doctrine is that both "core missions are severely constrained by a lack of resources."²⁴⁶ The PN's role has typically been "confined to offshore and inshore patrolling, using Marine Corps personnel in the infantry role, and providing limited sealift for the army."²⁴⁷ Even in this role, the PN and the AFP overall "suffers from a lack of secure networking capability that restricts effective interoperability."²⁴⁸ While the AFP has an "emphasis on developing doctrines, increasing training and improving operational integration between the three services" there is not enough capability by the PN or the Philippine Air Force to support joint operations other than providing limited lift to the Philippine Army.²⁴⁹ The 2012 DND White Paper states that the AFP will have the capability of "appropriate strategic response forces for the conduct of defensive operation under joint warfare concept and to respond to disastrous events . . . this capability

²⁴⁸ Ibid., 7.

²⁴⁹ Ibid.

²⁴⁵ Jane's, "Philippines Navy," *Jane's Sentinel Security Assessment – Southeast Asia*, posted 8 October 2016, accessed 1 November 2016, http://janes.ihs.com.lumen. cgsccarl.com/SouthEastAsia/Display/1767467, 6.

²⁴⁶ Ibid.

²⁴⁷ Janes, "Philippines Armed Forces," 8.

requirement would need the establishment of a joint operational concept that will integrate capabilities across the various operational domains such as sea, air, land and cyberspace."²⁵⁰ The DND elaborates that this capability will require a:

Three-tiered Philippine Navy fleet with sub-surface and air warfare capabilities added to a more improved surface capabilities not only for sea denial and patrol, but also to ensure the sovereignty of the archipelago and the country's Exclusive Economic (EEZ). Subsurface operations capability is essential in strengthening active defense and joint warfare. Submarines provide viable offensive and defensive capability to protect national interests. Thus, it favors well for the Philippines, being an archipelagic country, for its Navy to develop submarine warfare capability to deter aggression and bullying.²⁵¹

The DND and the PN have demonstrated their overwhelming desire for submarines and the creation of a traditional Navy fleet that will be used for sea denial operations under a joint warfare concept. However, the Philippine government's ability or desire to fund such a fleet has not overcome the many obstacles it faces and it is doubtful such a fleet can be procured, thus making any such doctrine irrelevant for the PN. The analysis under the materiel domain will show that despite any three-tiered fleet the Philippine DND can create, the Chinese PLA-N will overwhelmingly outmatch it in quality and quantity. The PN surface combatants would likely be easy prey to Chinese nuclear powered submarines or modern aircraft. Instead, a doctrine that focuses on sea denial without a reliance on naval platforms should be considered. A doctrine that emphasizes joint operations between the Army and the Navy in coastal defense out to the EEZ through the use of much cheaper equipment than naval platforms would be more relevant and useful than the current doctrine based on a fleet that is not likely to

²⁵⁰ DND, *Philippine Defense Transformation White Paper*, 10.
²⁵¹ Ibid.

materialize. This equipment will be discussed further in the Materiel domain analysis below.

Organization

The current organization of the PN is split into two commands, the fleet and the marine corps and is basically the U.S. Navy model, indeed, the "Philippine military has a standard US-orientated command structure."²⁵² The PN fleet is then divided into six categorizations: Ready Force, Patrol Force, Service Force, Assault Craft Force, Naval Air Group, and Naval Special Warfare Group. There are seven regional force commands based geographically throughout the Philippines islands.²⁵³ The PN Strategic Sail Plan states that the PN will "Adopt a dynamic and responsive naval organization."²⁵⁴ Again, the implication is that with the acquisition of the desired force mix, the PN will have the capabilities it needs to respond to its mandated mission. One important change to the organization that the Sail Plan is carrying out consists of addressing the problems within the PN as an organization.

As Banlaoi explains, "One important innovation of the SSP [Strategic Sail Plan 2020] is the creation of the Centre for Naval Leadership and Excellence, which is considered to be the first of its kind in the whole AFP [Armed Forces of the Philippines]."²⁵⁵ From its website, the PN CNLE "primarily functions as the Philippine

²⁵² Jane's, "Philippines Armed Forces," 9.

²⁵³ Jane's, "Philippines Executive Summary," 4-5.

²⁵⁴ CNLE, Philippine Navy Strategic Sail Plan 2020.

²⁵⁵ Banlaoi, 21.

Navy's Office of Strategy Management." Banlaoi elaborates from the Strategic Sail Plan 2020 that the CNLE's main purpose is "to oversee, ensure and sustain the proper implementation and cascading of the Sail Plan as well facilitate its review and enhancement."²⁵⁶ The center has specific tasks to perform as mandated by the Strategic Sail Plan 2020 that includes (for the organization domain—there are other tasks that fall into the leadership and training domain that will be discussed in those sections) the task to "facilitate for the establishment of networks from PN external stakeholders and ensure their involvement in PN initiatives."²⁵⁷ With this mandate, the Centre for Naval Leadership and Excellence has conducted Sail Plan Boot Camps that typically consist of lectures in a multi-day workshop "aiming to imbue the Sail Plan Officers of the different Navy offices and units with the skills and mindset in managing the Sail Plan, the Navy's organizational development plan."²⁵⁸ The Centre for Naval Leadership and Excellence also conducts Strategic Planning Seminars, most recently in conjunction with the National Defense College of the Philippines in order to "train its new pool of strategic planners as it sets to craft a new vision and strategy for 2028 and even beyond."²⁵⁹ The Centre for Naval Leadership and Excellence has clearly embarked on an ambitious campaign to change the culture of the PN but has it considered a future without the desired force mix?

²⁵⁹ Ibid.

²⁵⁶ Banlaoi, 21.

²⁵⁷ Ibid.

²⁵⁸ Philippine Navy Center for Naval Leadership and Excellence, "Philippine Navy Strategic Sail Plan 2020," Facebook, posted 26 April 2017.

This mandate to establish networks should be used in order to establish an organization with systematic innovation, that is, open networks working with the PN and with outside stakeholders that can serve as the forum to find solutions to Philippine maritime problems, as Mulqueen, Sanders, and Speller argued for in their book *Small Navies*. These forums can tackle the problems facing the PN and their naval modernization. By establishing this forum, the PN can specifically seek solutions to become strong and credible by 2020—such as in changing PN organization (or beyond, as this study will conclude that the PN will not be in a position to exert internal maritime defense by 2002 given current rates of materiel acquisition and the training required to carry out those missions).

This study argues that in the organization domain, the PN should consider adopting (much like Mulqueen recommends in their innovation chapter) a change in the organization structure that forms a maritime defense unit that would be based on land and at sea. This component would carry out the tasks that Krepinevich recommends in his article, "How to Deter China.' In that article, he argues that U.S. Army or other allied ground forces (perhaps Philippine Army soldiers) can carry out defensive mining within the Philippine archipelago in order to deter China through the denial of those mined seas. If, perhaps due to interservice rivalry, the Philippine Army is unable or unwilling to carry out this mission, it could be a PN component that is "armed with the ability to emplace sea mines from land bases using short-range rockets, helicopters, or barges . . . [and] make large stretches of sea off-limits to the Chinese navy."²⁶⁰ Similarly, this, or other

²⁶⁰ Krepinevich, 81.

units, can also carry out the task of air defense with the use of "highly mobile and relatively simple short-range interceptor missiles."²⁶¹ Finally, such a component can carry out coastal defense through the use of mobile launchers and anti-ship cruise missiles, similar to what the Japanese Ground Self-Defense Forces has done in the Ryukyu Islands.²⁶² While this study has already documented the fact that the PN must still reconstitute its sea-based naval mine warfare capability, that involves primarily mine hunting and mine sweeping. The laying down of a mine-field for sea denial is a much simpler process.

What organization is considering these questions of land-based maritime deterrence? Is the Philippine Army, while attempting to consolidate its gains and finally pacify the insurgencies in the southern Philippines, considering such maritime threats and the possible capabilities it should have to counter them? On the other hand, should it be the maritime component, the PN, which establishes this primarily land-based deterrent capability? It is not so far removed from the idea of the PN being a part of a national Philippine Coast System that is primarily land-based but networked (or receives data updates) from its sea platforms to establish and maintain the maritime awareness needed by the Philippine government and the AFP.

²⁶¹ Krepinevich, 81.

²⁶² Ibid., 4.

Training

Basic training in the PN "generally follow US Navy practice"²⁶³ for new enlisted and officer recruits. Past this basic level, training the PN in new capabilities it has long not practiced, nor used, will be a real challenge. The PN does not have any assets nor has it trained on such naval capabilities such as anti-submarine warfare, surface warfare, mine warfare, air defense, to name a few. Lacking sufficient assets, the Strategic Sail Plan 2020 still recognizes that the PN must "develop highly competent and motivated professionals."²⁶⁴ Therefore, it is doing what they can with what they have and seeking partnerships with which to improve. As early as the August 2011 meeting of the Mutual Defense Board for the Philippines and the United States "allies formulated a framework for heightened bilateral . . . security, and domain awareness."²⁶⁵ This framework included "increased joint bilateral maritime security activities in the South China Sea"²⁶⁶ among other measures outside of the training domain. The Co-operation Afloat Readiness and Training with the United States is an annual bilateral maritime exercise. In 2016 .Cooperation Afloat Readiness and Training had events in waters off of Palawan in the South China Sea.²⁶⁷ Unfortunately for the U.S. Navy-PN relationship, the current administration under President Duterte has cancelled future Co-operation Afloat Readiness and Training

²⁶⁶ Ibid., 121.

²⁶³ Jane's, "Philippines Navy."

²⁶⁴ CNLE, *Philippine Navy Strategic Sail Plan 2020.*

²⁶⁵ De Castro, 111-131, 121.

²⁶⁷ Jane's, "Philippines Navy."

exercises saying that "he was pursuing a foreign policy in which the Philippines would no longer follow the dictates of its treaty ally [the United States]."²⁶⁸ Although the annual U.S. Navy-PN maritime exercise appears to be discontinued, the PN has an opportunity to continue maritime exercises with the Royal Australian Navy, the Japan Maritime Self Defense Force, and even with Canada.

The bilateral exercise with the Royal Australian Navy named *Lumbas* started in 2006 and appears safe to continue, as President Duterte has not voiced any anti-Australia sentiment the way he has clearly voiced his opinion and desire to separate from the United States. Additionally, in 2015 the Australian government donated two ex-Royal Australian Navy ships to the PN. These materiel acquisitions are further discussed in the materiel section discussion, but highlighted here for the opportunity for the Royal Australian Navy to train the PN, and no less, on their old ships

Likewise, the strategic relationship between the Philippines and Japan continues to improve despite any lingering animosity over the cruelties of the Japanese occupation of World War II. The Japanese Maritime Self Defense Forces and the PN began regular interactions in 2015 and Japanese Maritime Self Defense Forces ships have made their first port calls in the Philippines.²⁶⁹ The strengthening relationship is clearly seen in the Philippine Coast Guard's acquisition of 10 Japan-built multirole response vessels that will "improve the Philippine Coast Guard's ability to protect the Southeast Asian

²⁶⁸ Macas.

²⁶⁹ Jane's, "Philippines Navy."

country's maritime territory and assets."²⁷⁰ While this is not a direct assistance to the PN, there is an opportunity for cross-training between the PN and the Philippine Coast Guard, as both organizations can benefit from combined training in basic seamanship, damage control from fires and flooding, and marine navigation—things that all sailors must be able to do.

In 2014 Canada and the Philippines signed a memorandum of understanding on training cooperation that included English language training, naval boarding party tactics, among other topics. Despite the opportunities for training with other country navies, the PN must maximize sea training and rotate the crews to maximize training across the platforms as they are acquired. In the book by Mulqueen, Sanders, and Speller, they asserted that small navies, due to their lack of assets and ability to maintain vessels out at sea, also suffer from adequate training precisely because of the lack of opportunities for sea time.²⁷¹ Where a larger navy can overcome this challenge by simply cross decking and sending its sailors to another sea-going ship, the PN does not have that option. In the end, the quantity of training suffers from the lack of sea time.

The PN should expand its strategic partnerships and foreign exchange officers to maximize training of its young officers in the fleets of the Japanese, Korean, Australian, and U.S. navies. The professional military exchanges will be invaluable in gaining sea experience for Filipino sailors and building their own fleet experience.

²⁷⁰ Julian Ryall, "First of 10 Japan -built MRRVs Arrives in the Philippines," *Jane's Defence Weekly*, posted 18 August 2016, accessed 1 September 2016, http://www.janes.com/article/63065/first-of-10-japan-built-mrrvs-arrives-in-the-philippines.

²⁷¹ Mulqueen, Sanders, and Speller, 23.
Materiel

This study only considers acquisitions and planned acquisitions known or published as of 15 May 2017. Much as China has looked and achieved an asymmetric advantage within the South China Sea against the U.S. military, so must the Philippines seek such an advantage. In January 2017, according to Jane's, the PN consisted of the following surface units listed below. Of note, the PN does not possess any missile or torpedo armed combatants. It no longer has any ships capable of anti-submarine warfare, surface warfare, or air defense. Compared to the rest of South East Asia and specifically the Chinese South Seas Fleet, there is a glaring lack of missile and torpedo armed patrol/coastal craft that (as the smallest of the ships being considered for the desired force mix) would be the cheapest to purchase and operate, but would not have the operational range to challenge the contested areas such as the Scarborough Shoal without at sea replenishment. Consider the distances from the nearest Philippine naval port to either of the contested areas in the South China Sea. For the Scarborough Shoal, the nearest Philippine port is the Subic Bay Freeport Zone at a mere 170 nautical miles distance and only 220 nautical miles to Manila. From Second Thomas Reef to Oyster Bay on Palawan Island it is 200 nautical miles. Considering the need to patrol these features within the Philippines 200 nautical miles EEZ, most of the ships the PN currently operates "that are tasked to undertake effective patrols and efficient blockades in the EEZ only have a 40mile radius coverage" and the "ill-equipped coastal patrol and anti-infiltration ships only have two-day endurance and 20-mile radius coverage, which is not enough given the

country's archipelagic features."²⁷² See figure 7 for a visualization of the distances discussed. For cross-reference, the Philippines refer to Thitu Island as Pas-asa Island and Scarborough Shoal as Bajo De Masinloc.



Figure 7. Scarborough Shoal and Thitu Island Distance to Surrounding Coastlines

Source: Aileen S. P. Baviera, Ph.D. and Jay Batongbacal, JSD, "The West Philippine Sea: The Territorial and Maritime Jurisdiction Disputes from a Filipino Perspective. A Primer" (Asian Center for Maritime Affairs and Law of the Sea, University of the Philippines, Manila, Philippines, 15 July 2013), 5.

²⁷² Banlaoi, 17.

However, a batch of three multi-purpose attack craft being built in-country and expected in 2017 will be armed will the Israel's Rafael Advanced Defense Systems Spike Missile System, can carry 20 armed marines and have a range of about 200 nautical miles. These Philippine built MPAC come at a cost of about 2 million USD each. Based on this cost "the PN's target to acquire a total of 42 vessels is probably overambitious."²⁷³ When adding in the cost of the weapons suite from Israel's Rafael Advanced Defense Systems of \$12.5 million for the first three MPAC's, the total cost for the first three units comes to 18.1 million USD. Assuming a similar price tag for the other 39 units requested by the PN, and the total cost would come out to 253.4 million USD for the MPAC acquisition.

Current Philippine Force Structure

1 Frigate, the BRP Rajah Humabon (ex US Cannon class frigate)

3 Frigate, Gregorio del Pilar class (ex US Hamilton class Coast Guard cutter)

12 Corvettes, 3 Jacinto Class

2 Rizal (ex US Auk) Class

6 Malvar (ex US PCE 827) Class

1 Alvarez (ex US Cyclone) Class

Coastal patrol craft (64 units of various types)

6 MPAC

Amphibious ships:

²⁷³ Jane's, "Philippines Procurement," *Jane's Sentinel Security Assessment – Southeast Asia*, posted 10 February 2016.

2 LPD, BRP Tarlac class (ex IDN Makassar)

4 LST, 2 BRP Bacolod City

2 BRP Zamboanga del Sur

35 Landing Craft of various types

16 Logistics and Support ships of various types.²⁷⁴

Figure 8 summarizes the current PN composition. Also included in the chart is the

imminent transfer of ex-Republic of Korea Navy Po Hang class corvette.



Figure 8. PN Principal Combatants by Class

Source: Created by author using data from International Institute of Strategic Studies, "Asia," in *The Military Balance 2017* (New York: Routledge, 2017), accessed 14 February 2017, http://www.tandfonline.com/loi/tmib20.

PN Desired Force Mix

Where does the PN want to get to and why? De Castro's article summarizes it in

this way:

²⁷⁴ International Institute of Strategic Studies, "Asia," 324-325.

In mid-2012, the PN publicly presented a 15-year acquisition plan called the "Philippine Fleet Desired Force Mix." This plan does not aspire to match the level of naval capability of China but to develop a certain deterrence capability for the PN to inflict damages to any hypothetical opponent in the South China Sea. The PHP 500 billion (US \$10 billion) naval build-up program provides for the acquisition, within a 15-year period, of the following naval assets: six frigates designed for anti-submarine/anti-air warfare; 12 corvettes primarily for anti-submarine warfare, 18 offshore patrol vessels (OPVs) that will comprise the backbone for naval patrol; 26 naval and multi-purpose helicopters for maritime domain awareness; 42 multi-purpose assault craft (MPAC) armed with torpedoes and missiles for territorial sea interdiction and maritime situational awareness; and three diesel submarines for limited sea-denial operations.²⁷⁵

As De Castro states, this does not try to match China's naval capability.

According to the Office of Naval Intelligence's 2015 publication, *The PLA Navy: New Capabilities and Missions for the 21st Century*, China's South Seas Fleet consisted of: two nuclear attack submarine, four ballistic missile submarines, and 16 diesel submarines, nine destroyers, 20 frigates, 25 amphibious ships, 38 missile patrol craft and eight corvettes. Adding the rest of the major South China Sea bordering countries of Taiwan, Vietnam, Singapore, Malaysia, and Indonesia. The respective navies compare as shown in figure 9. For ease of viewing, all submarines classes (SSN/SSK/SSBN) have been grouped, all major surface combatants (cruisers, destroyers, frigates and corvettes) have been grouped, only LPDs are considered under the amphibious grouping for their role as a principal combatant, and only missile or torpedo armed patrol craft are depicted. The chart assumes that the Philippines Desired Force Mix's patrol craft will all be armed with missiles or torpedoes to match their counterparts in the South Seas Fleet (which seems likely as the first batch of three expected in 2017 will be armed with Israel's Spike Missile System, however, as previously mentioned, the number of acquisitions of 42

²⁷⁵ De Castro, 120.

appears overly-ambitious). While all the navies represented have much larger numbers of patrol craft and amphibious vessels (such as LSTs), only principal combatants that could be potentially used for sea denial and sea control were considered.



Figure 9. South China Sea Principal Combatants by Country

Source: Created by author using data from International Institute of Strategic Studies, "Asia," in *The Military Balance 2017* (New York: Routledge, 2017), accessed 14 February 2017, http://www.tandfonline.com/loi/tmib20.

China South Seas Fleet	PN Desired Force	Taiwan	Vietnam	Singapore	Malaysia	Indonesia
111	82	75	47	31	24	56

Table 5.Total Combatant Units by Country

Source: Created by author using data from International Institute of Strategic Studies, "Asia," in *The Military Balance 2017* (New York: Routledge, 2017), accessed 14 February 2017, http://www.tandfonline.com/loi/tmib20.

This is just raw numbers of combatants. What is missing is the quality of the respective units for their intended roles. This study will first consider the case of the disparity in submarines between China's South Seas Fleet and the rest of Southeast Asia, to say nothing of the even wider disparity with the PN.

The PN desires three diesel submarines for limited sea denial.²⁷⁶ Hervey's asserts that "Submarines have important anti-ship and anti-submarine roles to play in support of either type of strategy [sea control and sea denial], and in both these roles may act offensively, defensively—or both."²⁷⁷ As the Philippines is specifically interested in the defensive sea denial aspect, consider the submarines role in this strategy. Hervey provides an example of the effectiveness of sea denial by an SSN during the April 1982 Falklands scenario between Britain and Argentina. Britain announced an exclusion zone 200 nautical miles around the Falkland Islands and defended this zone with multiple SSNs. HMS *Conqueror* attacked the Argentine ship Belgrano and the "net result was to persuade the Argentinean Navy to inflict sea denial on itself, throughout the region, not just in the EZ. One could not have a better example of the usefulness of SSNs."²⁷⁸ Since China is the only country bordering the South China Sea with SSNs in its fleet, the Falklands scenario speaks to the high level of effectiveness her nuclear powered

²⁷⁸ Ibid., 12.

²⁷⁶ De Castro, 120.

²⁷⁷ RADM John Hervey, USN, *Submarines*, Brassey's Sea Power Naval Vessels, Weapons Systems and Technology, vol. 7, ed. Geoffrey Till (New York: Macmillan Publishing Company, 1994), 6.

submarines may have in a low-level conflict with its weaker neighbors in the South China Sea.

China's edge is expected to continue to grow, or at a minimum, advance technologically, as "the administration of President Xi Jinping is accelerating its efforts to make science, technology, and innovation a centrepiece of China's overhauled development model, and the defence sector looks likely to be one of the principal beneficiaries."²⁷⁹ Additionally, the "Chinese defence-industrial bureaucracy, led by the State Administration for Science, Technology, and Industry for National Defence, has formulated new strategies and plans to significantly adjust the defence industry."²⁸⁰ The chart above indicated the South Seas Fleet units in 2015 as published by the Office of Naval Intelligence, China continues to modernize her naval fleet and it can be well expected that she will add more SSNs while her neighbors in the South China Sea struggle to keep up with adding diesel powered submarines to their fleets. Therefore, China's edge will continue to grow unless the PN embarks on a plan to acquire submarines at the rate of 5.5 subs per year. Assuming a program similar to Vietnam of 6 kilos at a cost of 2 billion USD, this would represent more than the entire yearly Philippine DND budget, which in 2016 was about 2.54 billion USD.²⁸¹ In other Philippine government spending, the Philippine government has "priorities of the secondhorizon programme to modernise the Armed Force of the Philippines" but this 2018-2022

²⁷⁹ International Institute of Strategic Studies, "Asia," 260.

²⁸⁰ Ibid.

²⁸¹ Ibid., 324.

budget "will be allocated funding of around PHP 100 billion"²⁸² (about 2 billion USD at 2017 exchange rates). So even this specific funding specifically for AFP, and thus PN, procurement, falls significantly short and a submarine program would require annually 100 percent of the procurement budget allocated for a five-year period and hence not feasible.

The Philippines desire for adding submarines to her fleet can be understood, for as Hervey asserts "less debatable, because largely a matter of historic record, is the effect which submarines can have on the fortunes of nations at war."²⁸³ The diesel submarine was put to good use during both world wars, are diesel submarines needed for the PN to be strong and credible? What capability would three diesel submarines provide to the PN? The analysis that follows will answer these questions.

In the compilation, *Military Innovation in the Interwar Period*, Herwig asserts about the submarine, "to its advocates, it constitutes a cheap but effective counterthreat to superior surface forces, the weapon of the poorer against the richer power."²⁸⁴ The diesel submarines of today are quieter, better armed technological wonders, they still possess (or suffer from?) the same principles as their forefathers that wreaked havoc in the world's oceans during both world wars.

²⁸² Jon Grevatt, "Philippines Outlines 'Second Horizon' Procurement Priorities," *Jane's Defence Weekly*, accessed 14 March 2017, http://janes.ihs.com.lumen. cgsccarl.com/Janes/Display/jdin91516-jdw-2017.

²⁸³ Hervey, 3.

²⁸⁴ Williamson Murray and Allan R. Millett, eds. *Military Innovation in the Interwar Period* (Cambridge, UK: Cambridge University Press, 1996), 227.

Those five principles identified by Karl Lautenschlager are neatly outlined by Herwig in his essay, "Innovation Ignored: The Submarine Problem." The first three are reviewed, as they are pertinent to the Philippines Navy desire for submarines and in their expected use as part of a defensive sea denial strategy.

First, underwater warships possess no inherent immunity against countermeasures. Although they are difficult to find and largely invulnerable while submerged, submarines are open to attack once they disclose their presence by attacking surface vessels.

Second, navies have trouble integrating submarines into existing force structures and operational concepts. In most cases, navies have found it difficult to define a specific mission for the submersible. Conversely, submarines often receive combat roles before they can fulfill them.

Third, competing wartime demands on submarines often preclude their achieving full potential. Are they designed primarily for coastal defense, support of the main battle fleet, or patrol as independent raiders? Their ability to perform several missions, then, brings with it a tendency to divide the force among a number of possibilities.²⁸⁵

The above principles still hold true for any diesel submarine, and hence any submarine that the PN would acquire. Diesel submarines are limited by their slow submerged speed, by their need to snorkel and recharge its batteries, and even by their smaller crew size that would quickly fatigue during wartime conditions. If the PN had only three diesels, and assuming that all are at sea, the sea denial that they would impose on the enemy would become limited after an attack and in making their position known via the attack. Not only would their limited speed now give the enemy an area they could safely assume avoids the submarines using basic concepts of furthest-on-circle, the

²⁸⁵ Murray and Millett, 227.

submarine would now also make themselves vulnerable to attack with their general location known.

As for the second principle, the PN would find it difficult to integrate their submarines into its operational strategy for defensive sea denial of an area because of the nature of the submarine in that its communications are limited, the need to minimize and even restrict emissions by their submarines in order to maintain a covert posture, and the generally limited area that the diesel submarine could effectively patrol given its slow patrol speed and slow transit speed to reach the patrol area. Any patrol area designated for the submarine would be complicated by any friendly surface units or aircraft trying to also operate in the area. Thus, the area designated for the submarine would need to be relatively clear of (possibly interfering) friendly units. Doctrinally submarines work best in capacities where frequent synchronization and coordination with surface ships and aircraft are not required. Their presence could hinder PN attempts at sea denial with more numerous surface and aircraft available.

For the third principle, the desired PN submarines, being limited in number, would have to be given a specific mission between coastal defense, patrol as independent raiders or support to the main fleet. It would be easy to desire that the submarines do all three missions given the expected disparity in unit strength between the PN and any other adversary in the South China Sea. Again, the low number of submarines desired, three, means that, realistically, only one submarine will be out at sea conducting missions while the other two are in maintenance upkeep and/or training cycle. The initial low number of three must be the starting point for the PN to build its submarine program—training for the PN crews in operating in the undersea domain, experience for the PN shipyards in maintaining those submarines, and practice for the PN, AFP, and DND in how their newly acquired capability will be used according to their maritime strategy. This initial experience should then be the foundation for further acquisitions until the PN is able to operate at least one full squadron of submarines of at least six units, much like the Vietnam People's Navy employs.

As CDR Bailey concludes in his Naval War College monograph "6 Kilos: Can Vietnamese Submarines help reclaim the South China Sea?"

A small submarine force will be able to make a credible difference in countering one of the largest navies and submarine forces in the world. Using sea denial operational concepts, the Vietnamese submarine force will present an asymmetric threat to China and will give them pause in future indiscriminate armed engagements with unarmed commercial vessels. With increased cooperation with neighbor ASEAN states that are pursuing similar capability, Vietnam will undoubtedly be able to increase balance and stability in the region.²⁸⁶

The PN may be able to use the Vietnamese example in building up its own submarine force, and as CDR Bailey states, increased cooperation between the two countries, Vietnam and Philippines, can help increase balance and stability in the region. How far should the PN try to copy the Vietnam example? Is the purchase of Russian built Kilo class submarines the best option for the PN? Answering these questions are outside the scope of this study, but will only agree with the reasons, similar to Vietnam, on why the PN would choose the Kilo class submarine, in that since the Kilo class was for Vietnam "the only conventional class export that they could afford in significant number (6) that would have any operational impact in the region"²⁸⁷ and that as the Philippine

²⁸⁶ Bailey, 16.

²⁸⁷ Ibid., 9.

administration under President Duterte seeks closer ties with China and Russia, the Kilo class would represent a sizeable procurement in Russian defense materiel for the Philippines and a real opportunity to leverage the same platform with the Vietnamese in their training, shipyard maintenance and supply chain management. The choice of submarine is not trivial, even between diesel submarines there is a wide disparity in capabilities. As Hervey's illustrates in making a point on the differences between British and French made diesel submarines, "had South Africa owned British OBERON class submarines, instead of the shorter ranged French DAPHNE class, they could have shut Luanda, 3,400 kilometers to the north, to cut Cuban resupply of Angola during the long confrontation with SWAPO."288 Of course, Admiral Hervey has reason to be biased for the British case as a British Admiral. For the Philippines, there is a strong case to be made in choosing one of the Kilo class variants. The analysis of which conventional submarine would be best suited for the PN is outside the scope of this study to make a recommendation on exactly which diesel submarine the PN should acquire but could be considered in a future study.

Whatever the final decision, and while true that diesel submarines "are the only type of submarine that most people can afford,"²⁸⁹ "even an SS represents a hefty outlay."²⁹⁰ Using the Vietnamese as the example for their six Kilos, the purchase agreement with Russia was at a cost of 2 billion USD and included training and

²⁹⁰ Ibid.

²⁸⁸ Hervey, 13.

²⁸⁹ Ibid., 277.

construction of a maintenance facility.²⁹¹ When compared to the price tag for a single nuclear powered submarine, for example, the \$1.8 billion seen often quoted for a single *Virginia* class nuclear powered submarine, this amount may seem modest for an entire squadron. How does this compare to the budget of the PN and its modernization program?

The total defense budget for 2016 for the DND was PHP 174.8 billion or about 3.7 billion USD.²⁹² From that budget of the DND, "95% of all expenditure is allocated to the Army, Navy, Air Force and Headquarters."²⁹³ Specifically for the procurement budget, the Philippines allocated PHP 75 billion, about 1.8 billion USD, for procurement during 2012-2017 and "is intended for the procurement of: attack helicopters, naval helicopters, frigates, offshore patrol vessels, multi-purpose transport vessels, a range of C4ISR systems, a squadron of lead-in fighter trainers, missile and air/maritime defense systems, and long-range patrol aircraft."²⁹⁴ For the PN specifically, "the PN has spent PHP 11.7 billion on modernization since 2010"²⁹⁵ (about 293 million USD). Clearly, there is no option for the PN to acquire its desired three submarines (assuming a price tag of only 1 billion USD or half what the Vietnamese Navy spent for their six Kilos), given

²⁹³ Ibid.

²⁹⁴ Jane's, "Philippines Procurement," 5.

²⁹⁵ Ibid., 14.

²⁹¹ Bailey, 10.

²⁹² Jane's, "Philippines Defence Budget Overview," *Jane's Sentinel Security Assessment – Southeast Asia*, posted 18 January 2016, accessed 28 August 2016, http://janes.ihs.com.lumen.cgsccarl.com/SouthEastAsia/Display/1305077.

the lack of funding for the DND. As Jane's concludes in its "Procurement Assessment," "the PN has previously outlined an intention to acquire the submarine capability from 2020, although this is unrealistic given the budget situation and the need to develop considerable outlay in the areas of infrastructure, training, and upkeep. Thus, a 2025-2030 period appears more "appropriate."²⁹⁶ Such procurement would only be significant if China remains relatively at current strength.

If diesel submarines may be out of the procurement program for the next decade, at least surface ships are not, and indeed the PN has made great strides in the last year from being a completely obsolescent navy to at least a "1960's navy"²⁹⁷ with the acquisition of the three U.S. Coast Guard ex-Hamilton class cutters.

Leadership and Education

Recognizing that there is a crisis in the trust of PN senior leaders because of institutional corruption charges and a perception of such corruption the Strategic Sail Plan added a program for accountability in resource management and financial responsibility. The PN sailors of all ranks are being educated, indoctrinated, and committed to the tenets of the Strategic Sail Plan in an effort to change the culture of the PN officer corps. Again, is it the PN's CNLE that is tasked with three leadership related roles. The first is to "organize/ facilitate forums, seminars and other leadership related activities by inviting experts, leaders, and exemplary individuals from within and outside the organization who can share their personal experience in leadership and best practices

²⁹⁶ Ibid. 15.

²⁹⁷ Kaplan, 130.

in their organizations."²⁹⁸ Next, the center will assess the effects of PN leadership and governance programs and activities to PN personnel."²⁹⁹ The third task is to "Develop new leadership modules and programs that can be taught to PN personnel."³⁰⁰

How does the center plan to accomplish this? One method is their 2015 *Sail Plan Caravan*. From the CNLE:

The 2015 Sail Plan Caravan is an over-arching program which aims to strengthen the leadership and stakeholder support in implementing the Sail Plan, ensure the alignment of PN unit's efforts to the overall achievement of the Sail Plan objectives, enhance the knowledge and skills of PN personnel in the Sail Plan Management System and increase their appreciation and motivation towards the PN's transformational goals. The Sail Plan Caravan is composed of 21 Legs, which corresponds to onsite visits to all 21 PN Units.³⁰¹

The Sail Plan Caravan appears to be the PN's attempt to institute cultural change

within the PN with its focus on three specific "advocacies" of "Think Governance,"

Think Transformation, and Think Sail Plan."³⁰² Under each of these, the Sail Plan

Caravan has a specific goal in mind.

The Sail Plan Caravan promotes "Think Governance" "in order to enhance the drive of every PN personnel to pursue transparency and accountability." They aim assist every PN sailor in "developing a mindset and embodying values hinged on good

²⁹⁹ Ibid.

³⁰⁰ Ibid.

³⁰¹ Philippine Navy Center for Naval Leadership and Excellence (CNLE), "Sail Plan Caravan," Center for Naval Leadership and Excellence, Manila, Philippines, 2015, accessed 5 February 2017, www.cnle.navy.mil.ph.

³⁰² Ibid.

²⁹⁸ Banlaio, 21.

governance" recognizing that good governance "is the foundation of a strong and sustainable organization."³⁰³

The Sail Plan Caravan promotes "Think Transformation" as it recognizes that "managing change is perhaps one of the most challenging aspects in strategy management."³⁰⁴ Their brochure cites the usual factors that would be familiar to most military organizations, including the U.S. Navy: resistance to change, personnel transitions, and views of the change as a limitation or a threat.

The Sail Plan Caravan promotes "Think Sail Plan" because "in order to truly derive value from the strategy and ultimately realize our vision, key PN personnel must be geared with the necessary knowledge and skills in implementing the Sail Plan Management System."³⁰⁵

How will the program achieve its aims? CNLE advertises, "to operationalize the three advocacies . . . the [CNLE] will implement three major activities of Governance Coaching, Sail Plan Alignment and Sail Plan Information Drive."³⁰⁶

The major activity of Governance Coaching consists of "focus group discussion and interviews involving senior leaders and key officers of the unit" and thus the Center "will be able to ensure that our leaders are on board our Sail Plan Journey."³⁰⁷ The major

³⁰⁴ Ibid.

³⁰⁵ CNLE, "Sail Plan Caravan."

³⁰⁶ Ibid.

³⁰⁷ Ibid.

³⁰³ Ibid.

activity of Sail Plan Alignment consists of "a seminar-workshop which intends to ensure the alignment of unit Strategy Map and Balanced Scorecard to the PN Strategy Map" that will also "be complemented by lectures to ensure that PN personnel are geared with the necessary knowledge and skills to manage their respective Balanced Scorecards."³⁰⁸

The major activity of Sail Plan Information Drive is "an internal communications campaign" that "will have lectures which will cover the essential elements that all PN personnel must understand and appreciate in order for them to realize their individual contributions to the PN's vision" and "the release of information materials such as posters, leaflets, and brochures" that will "increase the awareness level of Navy personnel about the Sail Plan."³⁰⁹

Personnel

The PN will need to expand its personnel roles to crew the ships they are expecting to acquire and the PN "is looking to enlist . . . personnel to meet its projected manpower needs for the year and has launched a series of recruitment roadshows"³¹⁰ to address the expected shortages. Of the Philippine sailors, "morale appears to be generally good . . . pay is regular rather than competitive, but housing and other benefits help reduce differentials."³¹¹ The Philippines has recognized the need to develop their Reserve Forces in all branches of the DND stating "AFP humanitarian assistance and disaster

³⁰⁸ Ibid.

³⁰⁹ Ibid.

³¹⁰ Rahmat, 7.

³¹¹ Jane's, "Philippines Navy," 7-8.

response capability to . . . protect from the ill-effects of . . . natural and human-induced disasters" should "include the capability development and use of the Reserve Force."³¹² Realizing that the AFP must do more to recruit and retain the best personnel the "development of a professional military education program that will provide the enlisted personnel with leadership knowledge and skills that will enable them to effectively perform their roles as Non-Commissioned Officers" was emphasized as a priority focus for the AFP.³¹³ The DND has recognized that the AFP modernization efforts must include more than just equipment upgrades and acquisitions to address the "deficiencies in leadership, attitude, values, policies, processes, and performance" that significantly affect the DND.³¹⁴ Additionally, President Duterte himself "has vowed to prioritise the welfare of the military, telling that he will take care of them during his six-year term" and has visited wounded soldiers, will increase the size of the AFP, and has "directed the AFP leadership to form a committee that would facilitate better release of retirement and pension benefits of soldiers."³¹⁵

Based on these efforts, the personal remarks of the Philippines President, and the training made available through joint exercises with the Australian, Japanese and U.S. navies, it seems likely that the PN will be able to fulfill their personnel requirements as its manpower needs continue to grow throughout their modernization effort to become a

³¹³ Ibid., 38.

³¹⁴ Ibid., 2.

³¹² DND, Philippine Defense Transformation White Paper, 17.

³¹⁵ Asian Defence Journal, "President Rodrigo Duterte on Defence and Security Matters" (September 2016): 14.

larger navy. The real challenge would be to recruit and train personnel that would man the components of the AFP in charge of coastal defense using the equipment and organization model that this study recommends.

Facilities

The Philippines Navy has a headquarters in the capital city, Manila (as do the rest of the services). The PN has three major naval bases: Cavite (on the southern end of Luzon island), San Vicente (on the northern end of Luzon island), and Mactan (on Cebu island within the Visayas). The PN also has naval stations in Zambales, Palawan, Leyte, Davao City, Zamboanga, and Tawi-Tawi.

More importantly, it is building a naval station in Palawan that is 100 miles away from the Spratly Islands at Oyster Bay. It is also modernizing the Subic Bay Naval Base that was the largest U.S. Navy Base in Southeast Asia before U.S. departure in 1991.³¹⁶ The PN is expanding its Coastal Watch Program by "installing various radar outposts around the base to allow the military to better monitor events in the South China Sea" that "should allow us (the PN) eventually to monitor our seas in real time."³¹⁷ The expansion of the Coastal Watch Program will be a critical component of a system of systems solution to enable the PN to have the situational awareness it needs to properly deploy its limited forces against threats within its EEZ. The base as Oyster Bay and its proximity to the Spratly Islands would be a key enabler in getting PN assets to the

³¹⁶ Jane's, "Philippines Executive Summary."

³¹⁷ Zachary Keck, "The Philippines is Building a New Naval Base in South China Sea," *The Diplomat*, 8 October 2013, accessed 21 May 2017, http://thediplomat.com/2013/10/the-philippines-is-building-a-new-naval-base-inAccessed 21 May 2017south-china-sea/.

contested areas. By expanding the port to accommodate U.S., Australian, and Japanese vessels, the PN would be able to continue to train their fledgling fleet in areas that would likely be at the center of any conflict with China. This naval port and others, such as Subic Bay, should be included in the Enhanced Defense Cooperation Agreement between the Philippines and the United States along with the air bases specifically outlined as shown in figure 10.



Figure 10. Philippine Bases Designated in Enhanced Defense Cooperation Agreement for U.S. Use

Source: Dan Lamothe, "These Are the Bases the U.S. Will Use Near the South China Sea. China is Not Impressed," *The Washington Post*, 21 March 2016, accessed 21 May 2017, https://www.washingtonpost.com/news/checkpoint/wp/2016/03/21/these-are-the-new-u-s-military-bases-near-the-south-china-sea-china-isnt-impressed/?utm_term=. f5ffc96e9c1a.

Summary: Strategic Sail Plan 2020 Desired Force Mix Cost vs DND Budget

The PN promulgated its PN Desired Force Mix with the goal of acquiring six frigates, 12 corvettes, 18 OPVs 26 helicopters, 42 MPACs, and three diesel submarines. The PN's plan is a 15-year, 10 billion USD budget for procurement. Reviewing the cost of each:

Frigates: Desired units: six. Current inventory: four—The procurement of two navy frigates worth 388 million USD was approved in July 2015 by then President Aquino that should be missile-armed.³¹⁸ However, not much has been done and the plans to procure two frigates produced by South Korean shipbuilder Hyundai Heavy Industries³¹⁹ were finalized with their formal selection and notice of award for the program in September 2016.³²⁰ The DND "had set aside PHP 2.5 billion (\$57 million USD) to procure weapon systems and armaments for the two new-build light frigates."³²¹ The final cost that the Philippine government and DND plans to spend is 445 million USD to reach their goal of six frigates.

Corvettes: Desired units: 12. Current inventory: 12—Reviewing the Jane's graphic "Main ships of the Philippine Navy" there are 12 corvettes listed between the Jacinto, PCE 827, Cyclone, and Rizal class. The Jacinto class is the newest as those ships

³¹⁸ *Asian Defence Journal,* "The Philippines Armed Forces: Modernisation Program Updates" (September 2016): 10.

³¹⁹ Grevatt.

³²⁰ Jane's, "Philippines Navy."

³²¹ Jane's, "Philippines Procurement," 15.

were commissioned in the 1980s by the United Kingdom's Royal Navy for service in Hong Kong and entered the PN in 1997.³²² The Jacinto class is "currently undergoing phases two and three of modernisation programme"³²³ and can thus be expected to be considered operational and counted as three of the 12 desired corvettes. The other corvettes are World War II vintage. Some, such as the six PCE 827 class have an operational status that is "uncertain"³²⁴ but all are considered obsolete.³²⁵ Thus, there is the need for at least nine corvettes to meet the desired amount and there is very little public data available other than the expected transfer of "a decommissioned Po Hangclass guided missile corvette from South Korea."³²⁶ So while the PN "hopes to have 12 corvettes in service . . . how these will be acquired, new or second-hand, is yet to be made clear."³²⁷ Assuming the acquisition of new-build corvettes similar to the Po Hang class the expected cost would be 200-250 million USD³²⁸ per unit for a total cost of 1.8-2.25 billion USD (assuming nine new units acquired).

³²⁴ Rahmat, 3.

³²⁵ Banlaoi, 10.

³²⁶ Jane's, "Philippines Procurement," 15.

³²⁸ Francis Wakefield, "DND to Acquire Pohang Class Corvette Ship from South Korea," *Manila Bulletin*, April 27, 2017, accessed 15 May 2017, http://news.mb.com.ph/ 2017/04/27/dnd-to-acquire-pohang-class-corvette-ship-from-south-korea/.

³²² Jane's, "Philippines Navy," 13.

³²³ Jane's, "Philippines Defence Budget Overview."

³²⁷ David Saw, "Philippine Naval Modernisation Programmes," *Naval Forces* 35, no. 2 (2014): 87.

OPVs: Desired units: 18. Current inventory: zero. The OPV procurement program appears to be in the planning stages with "the PN . . . investigating the possible procurement of two helicopter capable offshore patrol vessels via the US FMS programme."³²⁹ These new build ships would support fleet-marine operations, naval gunfire support tasks and humanitarian assistance and disaster relief operations and are budgeted for \$50-\$75 million USD each.³³⁰ Assuming a similar budget for the entire 18 desired then the total cost is \$900 million to \$1.35 billion USD.

MPACs: Desired units: 42. Current inventory: six non-missile armed—The analysis above showed an expected cost of about 253.4 million USD for the 42 missile-armed MPACs desired. As the current inventory of six MPACs are not missile-armed, the assumption is that the full complement of 42 desired will be missile-armed for a total cost of 253.4 million USD.

Diesel Submarines—In January 2017 published remarks by "the Philippine secretary of defence Delfin Lorenzana stated that the DND is considering the acquisition of Kilo-class diesel electric submarines from Russia."³³¹ Jane's added further that "the possible acquisition is being considered against the backdrop of warming defence relations between Moscow and Manila under President Rodrigo Duterte's

³²⁹ Jane's, "Philippines Procurement," 18.

³³⁰ Ibid.

³³¹ Rahmat, 8.

administration."³³² The analysis reviewed earlier showed an expected cost of about 1 billion USD for three Kilo class submarines. Figure 11 summarizes the costs.



Figure 11. PN Desired Force Mix Procurement Costs

Source: Created by author using information from Jane's. "Philippines Procurement." *Jane's Sentinel Security Assessment – Southeast Asia,* posted 10 February 2016; Ridzwan Rahmat, "Shifting Fortunes: The Philippine Navy's Latest Spate of Modernisation Efforts Hangs in the Balance," *Jane's Navy International,* accessed 24 March 2017, http://janes.ihs.com.lumen.cgsccarl.com/Janes/Display/jni78013-jni-2017.

The final cost of all units desired across all classes is about 4.45 billion USD and more than double the funding expected to be allocated for 2018-2022 of \$2 billion USD for the entire AFP's modernization program. The Philippines has outlined several programs as the priority for the second horizon timeframe of 2018-2022 and the two

³³² Ibid.

frigates built by South Korea, fast-attack craft, and offshore-patrol vessels were among those priorities that were also in the PN's Desired Force Mix. The two frigates alone would take 500 million USD of that budget; about 25 percent of the total AFP modernization program budget for the five-year period from 2018-2022 and even one frigate would be about \$225 million, or about 12 percent of the modernization budget. Since the PN has been allocated about 33 percent of the modernization funding between 2013 and 2017,³³³ assume that the PN will continue to receive the same percentage (the Philippine Army has typically received 10 percent and the Philippine Air Force has typically received 50 percent). The PN would then receive about 660,000 million USD for modernization efforts from 2018-2022, only about one-seventh of the projected cost of the PN's desired units. The Philippine Army would receive about 200 million for modernization efforts. Given this budget, the procurement of a new build frigate seems unrealistic. The acquisition of cheaper offshore patrol vessels and fast-attack craft (a priority listed in the second horizon) seems reasonable and this would allow money in the budget for the procurement of coastal defense systems and naval mines.

Possible Alternate Materiel Program

Following the example of Vietnam and their acquisition of Russian weapon systems, the cost of Russia's export Bastion Coastal Defense System has been published from 100-150 million USD for the radar, control center, six launchers and 36 missiles and can be manned by a crew of just three men. With a range of fire of up to 300 kilometers (186 miles), the system can provide coverage almost over the entire 200 nautical miles

³³³ Jane's, "Philippines Defence Budget Overview."

EEZ. Placed on non-disputed islands, such as Palawan, the mobile system would have the advantage of cover from the tropical jungle canopy and hence more survivable than a fixed system.

Additionally, in 2016 Vietnam acquired the Israel SPYDER air defense system with a standard SPYDER combination consisting of a command and control vehicle, six self-propelled vehicles with a total of 24 missiles, a crane carrier, and a technical vehicle. In 2006, India contracted for 18 units with a contract price of 400 million USD, or about 22 million USD per unit. Like the mobile Bastion coastal defense system, this system would also benefit from the cover provided by the tropical jungle canopy and hence more survivable than a fixed system.

In the Philippine's archipelagic waters within the South China Sea, within the Spratly Islands, the Mindoro Straits, and the Balabac Strait leading further into the Sulu Sea the varying water depth requires different types of mines, including rising mines for deep water (shallow water defined as water depth 1,000 feet and shallower). The use of deep water rising mines "significantly extend the mineable area of the world."³³⁴ While the Philippines does not currently have a mine capability, it could quickly establish itself to conduct defensive mining as the purchase price of mines varies significantly as in 2006 Friedman reported that "typical prices are \$20,000 or less for vintage weapons, or \$200,000 or more for a rising mine."³³⁵ As already discussed in the literature review, Grove's point that mines can be placed by aircraft and all types of surface craft, large or

³³⁴ Norman Friedman, *The Naval Institute Guide to Naval Weapons Systems* (Annapolis, MD: Naval Institute Press, 2006), 774.

³³⁵ Ibid.

small, makes them a cheap weapon that would leverage any of the sea-worthy ships of the PN in a sea denial campaign. These ships would otherwise be useless in most naval engagements since they would be outgunned and outmatched by most any of the Chinese Navy surface combatants. Much more difficult would be minesweeping and mine hunting (developing that niche military capability much as the New Zealand Navy has done would be a candidate for a future study).

Figure 12 illustrates the costs discussed above as well as the number of units 100 million USD buys for vintage mines (5,000 mines) and the more advanced rising mine (500). With a coastline of over 36,000 kilometers the Philippines would need to focus naval mine warfare efforts in the key contested areas within the South China Sea and along the passages leading from the South China Sea into Philippine internal waters.



Figure 12. Recommended Weapons/Systems

Source: Created by author using information from Norman Friedman, *The Naval Institute Guide to Naval Weapons Systems* (Annapolis, MD: Naval Institute Press, 2006); Eric Grove, *The Future of Sea Power* (Annapolis, MD: Naval Institute Press, 1990); CDR Christopher Bailey, USN, "6 Kilos: Can Vietnamese Submarines Help Reclaim the South China Sea?" (Monograph, U.S. Naval War College, Newport, RI, 2013).

The Strategic Sail Plan and the Desired Force Mix have put a premium on the navy obtaining naval platforms. Unfortunately, the analysis has shown that the higherend, more expensive naval platforms are out of reach for the PN's procurement budget. By mixing lower-end cheaper naval platforms with shore based assets and a strategy of sea denial that emphasizes defensive naval mining and shore based mobile anti-ship missiles the PN can establish a minimally credible force that could deter Chinese aggression. More importantly, by focusing on acquiring indigenously built MPACs and OPVs several positive outcomes would occur. One of the noted weaknesses for small navies, the lack of a supporting defense industry, would be tackled with the focus on internal procurement, supporting the economy locally. The naval platforms of OPVs and MPACs would be key assets in maintaining maritime domain awareness, controlling the maritime borders, isolating any insurgent or terrorist groups to their present islands, and stemming the flow of illegal drugs, human trafficking, and illegal immigration that have typically supported these destabilizing groups. This support to internal security operations is of paramount importance to the current Duterte administration. By stabilizing the entire country's internal security the conditions would be established for increased economic development fueled by foreign investments throughout the entire country and not just the area around the Manila capital district.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The purpose of this research was to analyze the PN's efforts to become a strong and credible force by 2020. After a review of the pertinent literature, an analysis of the ways and means, through a review of the DOTML-PF domains (with a particular focus on the materiel domain), that the PN proposes to reach its ends of becoming a strong and credible force.

The primary research question was: will the PN be a strong and credible Navy that the Philippines can be proud of by 2020? This must be answered in the negative—the PN will not be a strong and credible force in 2020 and is likely only to move out of a rank 8, constabulary navy, and into the rank 7, inshore territorial defense navy as the PN acquires its first batch of three missile armed fast attack craft, the Republic of Korea Navy ex-Po Hang corvette, and continues its acquisition efforts for frigates. The qualifier of course is that compared to the PLA-N and Chinese threats to Philippine maritime sovereignty in the South China Sea, the Philippines is hopelessly outmatched and the PN will not be strong and credible against this threat in the foreseeable future, out to 2030, 2040 and beyond. This will be true partly because the Philippine economy will continue to be dwarfed by the Chinese economy and hence Philippine military expenditures will continue to be dwarfed by Chinese military expenditures. This will be true partly because the Philippines has been unable to solve the problems with domestic insurgency within its own borders and will have little recourse against the continuing encroachments in the maritime. This will be true partly because of the changing priorities of the Philippine

government. These are not new revelations and are well documented by Philippine scholars such as Dr. Renato Cruz De Castro,³³⁶ Dr. Rommel C. Banlaoi,³³⁷ and other noted authors such as Robert Kaplan³³⁸ and Bill Hayton.³³⁹

Given this strategic reality and the reality of limited Philippine defense spending leads to the first of the secondary research question: what steps should the Philippines take to maximize the strength and credibility of its navy between now and 2020? This study proposed a possible alternate material spending plan that incorporated equipment that the Philippine Army would also field in defense of their territorial sovereignty. The Philippines Desired Force Mix has proven to be an unrealistic goal given the budget constraints of the Philippine government. As the acquisition deals drag on year after year, the Philippine government has shown their disinclination to fund such expensive projects that a frigate or a conventional submarine entails, especially when those assets would be used for sea denial and not for the AFP primary goal of internal peace and security, primarily against internal armed threat groups.³⁴⁰ By merging the ideas of Krepinevich on "How to Deter China" and the recommendations in *Small Navies: Strategy and Policy for Small Navies in War and Peace*, edited by Mulqueen, Sanders, and Speller, the Philippine government would be able to field a force that would be stronger and more credible

³³⁶ See especially De Castro.

³³⁷ See especially Banlaoi.

³³⁸ See especially Kaplan.

³³⁹ See especially Hayton, *The South China Sea*.

³⁴⁰ Secretary of National Defense, Armed Forces of the Philippines, *Internal Peace and Security Plan "Bayanihan,"* vi.

against the threat posed by China within the DND's budget for the PN and Philippine Army. Instead of spending the bulk of their budget on just a few large ships, the budget should be spent on land based mobile anti-ship missile systems for coastal defense, landbased mobile air-defense systems for area-denial, and naval mines for sea denial. These weapon systems are within the budget of the Philippines and could be operated effectively much quicker than expensive and complicated seagoing platforms could be. This spoke to the materiel domain of the analysis but *Small Navies* also gave recommendations in the organization domain that the Philippines should consider.

Mulqueen argues that all navies tend to focus on "blue water and Mahanian traditions."³⁴¹ The Philippines Navy finds itself in the dilemma that it is trying to solve its problems by becoming a bigger navy. The analysis has shown that this will not solve the PN and the Philippines strategic issues it faces for its maritime sovereignty within the South China Sea. Instead, the Philippine government must decide which forces will man and train the land-based systems that will have as their primary role coastal defense and sea denial. Will this be the PN acting under the Philippine Army, or a component of the Army that works and coordinates under the PN for its targeting? Mulqueen argues that small navies must be innovative in this manner and seek new solutions to their problems with "military organizations that undertake unprecedented roles" that are often counter to 'sealed-in' military culture.³⁴²

³⁴¹ Mulqueen, Sanders, and Speller, 59.

³⁴² Ibid.

The key conclusion is that the Philippines Desired Force mix will not provide the Philippines with a strong and credible force by 2020. The Philippines Navy will always have the dilemma of being completely outmatched by the PLA-N because the Chinese economy dwarfs the Philippine economy and China will be able to bring more resources to their armed forces. This will remain especially true as the Philippines struggles to contain and control the terrorist and insurgent groups in its southern islands—a problem that even the U.S. Army was not able to solve over 100 years ago after acquiring the Philippines from Spain. As Bernard Cole concludes about the Philippine naval modernization efforts:

The Philippine Navy has neither the ship or personnel numbers nor the financial support from the central government to defend the Philippines' maritime interests. Manila is confronted by serious domestic challenges, including terrorist and insurgent threats, which pose its most important national security issue. In confronting China and other claimants to those land features [in the South China Sea], the Philippines has no option other than accommodating those nation's demands or relying on the United States for protection.³⁴³

This will continue to be true as long as the PN tries to simply grow bigger in order to solve its problems. The AFP itself must realize that its strongest asset and force that it has invested in most heavily and consistently, the Philippine Army, must be brought into the sea domain fight with land based anti-ship missiles, mobile coastal defense artillery, and anti-air defenses that can project and cover the sea lanes and straits out of the South China Sea and into the wider Pacific. These recommendations are not new and are expressed succinctly by Andrew Krepinevich in his article for *Foreign Affairs* "How to

³⁴³ Bernard Cole, "Vietnamese and Philippine Naval Modernization" (CNA Maritime Asia Project, Workshop Two, Naval Developments in Asia, Center for Naval Analyses, Arlington, VA).

Deter China." By merging his recommendations with the ideas for innovation brought forth by Mulqueen's, the PN can follow a path that is realistic and achievable within budget constraints by 2020 and that would pose a much more credible force against the encroachments by China in the South China Sea while continuing to support the efforts against domestic insurgency. One such possible alternate materiel plan is shown in figure 13.



Figure 13. PN and PA Second Horizon 2018-2022 Budget Spending Plan *Source:* Created by author.

The alternate plan presented is within the acquisition budget of the PN and the Philippine Army during the second horizon phase. The alternate plan proposes at least three Bastion Coastal Defense systems at a total cost of 300 million USD, 21 MPACs that would be built in the Philippines and armed with Israel Defense Systems missiles at a total cost of 125 million USD, five off-shore patrol vessels built in the Philippines at an expected cost of 250 million USD, a mix of vintage and sophisticated mines at a cost of 75 million USD, and at least five SPYDER air defense systems at a total cost of 100 million USD. This presents equipment that is reasonably procured before 2020 as it emphasizes smaller coastal patrol ships that could be built in the Philippines at a lower cost than what new build frigates or corvettes could be purchased, as well as cheaper weapons systems that the PN and PA could field now, and in the case of the PA and shore based missile systems, continue to be put on hold.³⁴⁴

Recommendations

In the short term, the PN can and must continue to lay the foundation for future capability through its efforts in the Strategic Sail Plan 2020 to address the weaknesses in the culture of the PN officer corps and enlisted ranks through the efforts led by the CNLE. The CNLE's Sail Plan Caravan efforts on good governance initiatives and training forums should be expanded to include education on a doctrine of the Army/Navy maritime team that will defend the nation's' maritime interests. The CNLE should continue to strive to make all PN sailors see themselves as stakeholders in the final outcome of transforming the PN into a credible PN/Philippine Army maritime force that together can be a strong and credible force against Chinese aggression within the Philippine archipelago. More importantly, this study recommends that the PN must realize that it cannot be strong and credible simply by growing up and becoming a bigger

³⁴⁴ Cynthia Balana, "Why DND Put on Hold P6.5B Israeli Missiles," *Philippine Daily Inquirer*, 8 July 2015, accessed 23 May 2017, http://newsinfo.inquirer.net/703712/why-dnd-put-on-hold-p6-5b-israeli-missiles.

navy. This study recommends the PN abandon plans for the acquisition of conventional submarines and large combatants and instead focus on acquiring affordable weapon systems that can be manned by their sailors and soldiers now—mobile land based anti-ship missiles for coastal defense, mobile land based anti-air systems for area denial, and naval mines for sea denial. These options are within the PN and PA budget, but would require a change in the entrenched thinking by naval officers and Army Officers on what constitutes maritime forces and whose responsibility it falls to protect the country's maritime interests. A summary of the proposed ends, ways, means, and their associated DOTML-PF domains is shown in table 6.

Table 6.Recommended Ways, Means, and Ends of Alternate Plan

coordinati	The PN will support the AFP misson of Army and Marine Corps up	ss/Maritime Security/Maritime Pression of securing internal peace at nits to control the maritime border opine Coast Guard, including and	nd security with the close er within the Philippine				
WAYS:	PN Operational Units/Ships Joint Navy/ Army maritime teams will conduct defensive operations within the Philippine archipelagic waters and out to the EEZ.	PN Shore Based Support Expanded nation-wide coast watch system fixed sites supplemented by mobile ground sites support maritime domain awareness.	Individual Sailor Sailors capable of expanded maritime tasks to include roles and capabilities typically seen as belonging to the Army soldier.				
MEANS:	Resources and Capabilities from the DOTML-PF						
	Doctrine: Joint doctrine that emphasizes combined Army-Navy action to secure internal peace through amphibious operations, sea transport of ground forces and sea based support of those ground forces in the fight against insurgents. Close coordination with the PCG to secure the maritime borders and prevent the flow of illegal immigrants, drugs, and contraband and supplies to insurgents. Maritime sovereignty maintained through a sea denial strategy that emphasizes small unit action by mobile ground forces working closely with their Organizations: Navy components to man and train on coastal defense systems in conjunction with the Army to make maritime forces ready to defend Philippine maritime sovereignty.						
	Training: Joint Army-Navy training on maritime domain awareness and coastal defense, air defense and sea denial within the Philippine Archipelago.						
	Materiel: Mobile land based coastal defense systems, mobile land based air defense systems, missile armed MPAC, and naval mines for sea denial used by Navy and Army maritime operational teams. Landing ships, Offshore patrol vessels and MPACs for inshore territorial defense that can also support counterinsurgency operations.						
	Leadership and Education: Continued education by the CNLE Caravan to instill the values of the PN transformation as well as promote the Navy/Army maritime team.						
	Personnel: Continued recruitment to man new acquisitions.						
	Facilities: Continued development of additional bases in the South China Sea, specifically those on Palawan						

Source: Created by author.

BIBLIOGRAPHY

<u>Books</u>

- Clarke, Barry, Jurgen Fielitz, and Malcolm Touchin. *Coastal Forces*. Edited by Geoffrey Till. Brassey's Sea Power: Naval Vessels, Weapons Systems and Technology Series. Vol. 10. New York: Macmillan Publishing Company, 1994.
- Cole, Bernard. Asian Maritime Strategies: Navigating Troubled Waters. Annapolis, MD: Naval Institute Press, 2013.
- Corbett, Julian. Some Principles of Maritime Strategy. Annapolis, MD: Naval Institute Press, 1988.
- Friedman, Norman. *The Naval Institute Guide to World Naval Weapon Systems*. Annapolis, MD: Naval Institute Press, 2006.
- Grove, Eric. The Future of Sea Power. Annapolis, MD: Naval Institute Press, 1990.
- Hayton, Bill. *The South China Sea, The Struggle for Power in Asia*. New Haven, CT: Yale University Press, 2014.
- Hervey, John, RADM, USN. Submarines. Brassey's Sea Power Naval Vessels, Weapons Systems and Technology. Vol. 7. Edited by Geoffrey Till. New York: Macmillan Publishing Company, 1994.
- International Institute of Strategic Studies. "Asia." In *The Military Balance 2017*, 237-250. New York: Routledge, 2017. Accessed 14 February 2017. http://www.tandfonline.com/loi/tmib20.
- Kaplan, Robert. *Asia's Cauldron: The South China Sea and the End of a Stable Pacific.* New York: Random House, 2014.
- Macintyre, David. Sea Power in the Pacific: A History from the Sixteenth Century to the Present Day. New York: Crane, Russak and Company, 1972.
- Morris, Michael. Expansion of Third-World Navies. New York: St. Martin's Press, 1987.
- Mulqueen, Michael, Deborah Sanders, and Ian Speller, eds. *Small Navies: Strategy and Policy for Small Navies in War and Peace*. United Kingdom: Dorset Press, 2014.
- Murray, Williamson, and Allan R. Millett, eds. *Military Innovation in the Interwar Period.* Cambridge, UK: Cambridge University Press, 1996.
- Till, Geoffrey. *Asia's Naval Expansion. An Arms Race in the Making?* London: Arundel House The International Institute for Strategic Studies, 2012.

Yoshihara, Toshi, and James Holmes, eds. *Asia Looks Seaward*. Westport, CT: Greenwood Publishing Group, 2008.

Government Documents

- Joint Chiefs of Staff. Joint Publication 1-02, Department of Defense Dictionary of Military and Associated Terms. Washington, DC: Government Printing Office, 8 November 2010. Accessed 22 September 2016. http://www.dtic.mil/doctrine/ dod_dictionary/.
- Philippine Department of National Defense. Philippine Defense Transformation White Paper. Manila, Philippines: Department of National Defense, 23 July 2012. Accessed 16 September 2016. http://www.dnd.gov.ph/pdf/PDT%20White% 20Paper_Final_23Jul12.pdf.
- Philippine Navy Center for Naval Leadership and Excellence. Philippine Navy Strategic Sail Plan 2020 – The Sail Plan Journey: Charting the Navy's Course for Transformation. Manila, Philippines: Center for Naval Leadership and Excellence. Accessed 16 September 2016. http://www.cnle.navy.mil.ph/ mediafiles/files/publications/pn_institutionalization_brochure.pdf.

_____. "Sail Plan Caravan." Center for Naval Leadership and Excellence, Manila, Philippines, 2015. Accessed 5 February 2017.www.cnle.navy.mil.ph.

Secretary of National Defense. Armed Forces of the Philippines. Internal Peace and Security Plan "Bayanihan." Manila, Philippines: Department of National Defense, Republic of the Philippines, 2010. Accessed 18 May 2017. http://www.army.mil.ph/home/images/bayanihan.pdf.

Journals/Periodicals

Asian Defence Journal. "President Rodrigo Duterte on Defence and Security Matters." (September 2016): 14-15.

_____. "The Philippines Armed Forces: Modernisation Program Updates." (September 2016): 10-13.

- Balana, Cynthia. "Why DND Put on Hold P6.5B Israeli Missiles." *Philippine Daily Inquirer*, 8 July 2015. Accessed 23 May 2017. http://newsinfo.inquirer.net/703712/why-dnd-put-on-hold-p6-5b-israeli-missiles.
- Blade, Max. "Philippine Navy: Continued Modernisation, New Submarines Questioned Under New President?" *Naval Forces* 4 (2016): 18-20.
- Cheng, Joey. "Manila Sees its Right Prevailing over Beijing Might." *Military Periscope*. Accessed 1 September 2016. https://apps.militaryperiscope.com.lumen. cgsccarl.com/SpecialReports/ShowReport.aspx?report=834.

- Cigaral, Ian N. P. "Duterte: US Could Have Stopped China's Structures." *Business World*, 30 March 2017. Accessed 23 May 2017. http://www.bworldonline.com/ content.php?section=Nation&title=duterte-us-could-have-stopped-china&8217sstructures&id=142993.
- Collin, Koh S. L. "Philippines Navy Challenge." *The Diplomat*, 27 December 2011. Accessed 15 March 2017. http://thediplomat.com/2011/12/the-philippines-navy-challenge/.
- Cushman, Jeremiah. "Conflicting Claims in the South China Sea." *Military Periscope*. Accessed 1 September 2016. https://apps.militaryperiscope.com.lumen. cgsccarl.com/SpecialReports/ShowReport.aspx?report=628.
- De Castro, Renato Cruz. "The Philippines Discovers its Maritime Domain: The Aquino Administration's Shift in Strategic Focus from Internal to Maritime Security." *Asian Security* 12, no. 2 (2016): 111-131.
- Fisher, Richard D. "Defending the Philippines: Military Modernization and the Challenges Ahead." *East and South China Seas Bulletin* 3 (2012).
- Grevatt, Jon. "Philippines Outlines 'Second Horizon' Procurement Priorities." Jane's Defence Weekly. Accessed 14 March 2017. http://janes.ihs.com.lumen. cgsccarl.com/Janes/Display/jdin91516-jdw-2017.
- Hayton, Bill. "South China Sea Ruling Rejects Beijing's Claims." Jane's Intelligence Review. Accessed 1 September 2016. http://janes.ihs.com.lumen.cgsccarl.com/ Janes/Display/jir12188-jir-2016.
- Jacobs, Keith. "The Philippines Navy." Naval Forces 3 (2009): 100-105.
- Johnson, Eric, LCDR. "Modernizing the Philippine Navy." *Proceedings* 140, no. 11 (November 2014): 81-83.
- Keck, Zachary. "The Philippines is Building a New Naval Base in South China Sea." The Diplomat, 8 October 2013. Accessed 21 May 2017. http://thediplomat.com/ 2013/10/the-philippines-is-building-a-new-naval-base-in-south-china-sea/.
- Krepinevich, Andrew. "How to Deter China." *Foreign Affairs* 94, no. 2 (March 2015): 78-86.
- LaGrone, Sam. "Philippine President Duterte: 'Serving Notice Now' to Cancel Future Military Exercise with the U.S." USNI News, 28 September 2016. Accessed 15 March 2017. https://news.usni.org/2016/09/28/philippine-president-servingnotice-now-cancel-future-military-exercises-u-s.

- Lamothe, Dan. "These Are the Bases the U.S. Will Use Near the South China Sea. China is Not Impressed." *The Washington Post*, 21 March 2016. Accessed 21 May 2017. https://www.washingtonpost.com/news/checkpoint/wp/2016/03/21/these-are-the-new-u-s-military-bases-near-the-south-china-sea-china-isnt-impressed/?utm_term=.f5ffc96e9c1a.
- Laude, Jaime. "Philippine Navy Needs P500B to Upgrade War Capability." *Philstar Global*. Accessed 21 May 2017. http://www.philstar.com/breaking-news/809955/philippine-navy-needs-p500b-upgrade-war-capability.
- Mangosing, Frances, and Matikas Santos. "What is the Enhanced Defense Cooperation Agreement and what does it mean for PH?" Inquirer.net, 28 April 2014. Accessed 15 March 2017. http://newsinfo.inquirer.net/597859/what-is-the-enhanceddefense-cooperation-agreement-and-what-does-it-mean-for-ph.
- Military Periscope. "Nations/Alliances/Geographic Regions Southeast Asia Philippines Armed Forces Structure." Accessed 1 September 2016. https://www.militaryperiscope.com.lumen.cgsccarl.com/nations/seasia/philippi/or ganzn/index.htm.
- Official Gazette. "The 2016 State of the Nation Address." State of the Nation Address of Rodrigo Roa Duterte, President of the Philippines to the Congress of the Philippines Session Hall of the House of Representatives. Delivered at the Batasang Pambansa Complex, Quezon City, 25 July 2016. Accessed 1 September 2016. http://www.gov.ph/section/historical-papers-doents/speeches/ state-of-the-nation-address/.
- Pazzibugan, Dona Z. "We're too Weak to Act on Spratlys Intrusions." *Philippine Daily Inquirer*, 25 May 2011. Accessed 12 February 2017. http://newsinfo.inquirer.net/ 8962/%E2%80%98we%E2%80%99re-too-weak-to-act-on-spratlys-intrusions %E2%80%99.
- Rahmat, Ridzwan. "Shifting Fortunes: The Philippine Navy's Latest Spate of Modernisation Efforts Hangs in the Balance." Jane's Navy International. Accessed 24 March 2017. http://janes.ihs.com.lumen.cgsccarl.com/Janes/ Display/jni78013-jni-2017.
- Ryall, Julian. "First of 10 Japan -built MRRVs Arrives in the Philippines." *Jane's Defence Weekly*, posted 18 August 2016. Accessed 1 September 2016. http://www.james.com/article/63065/fist-of-10-japan-built-mrrvs-arrives-in-thephilippines.
- Sanger, David E. "Philippines Orders U.S. to Leave Strategic Navy Base at Subic Bay." New York Times, December 28, 1991. Accessed 23 May 2017. http://www.nytimes.com/1991/12/28/world/philippines-orders-us-to-leavestrategic-navy-base-at-subic-bay.html?pagewanted=all.

- Saw, David. "Philippine Defence Modernisation Gains Momentum." *Military Technology* 4 (2014): 33-36.
- _____. "Philippine Naval Modernisation Programmes." *Naval Forces* 35, no. 2 (2014): 84-87.
- . "Political Changes Impact on Defence in the Philippines." *Military Technology* 9 (2016): 59-63.
- Singh, Amarjit. "Bilateral Talks Between the Philippines and China Will Likely Follow the South China Sea Arbitration Ruling." Jane's Intelligence Weekly. Accessed 1 September 2016. http://janes.ihs.com.lumen.cgsccarl.com/Janes/Display/ jiwk34364-jiwk-2016.
- Sy, Marvin. "Senate Wants AFP Procurement Eased, Speeded Up." *The Philippine Star*, 13 May 2015. Accessed 15 April 2017. http://www.philstar.com/headlines/2015/05/13/1454211/senate-wants-afp-procurement-eased-speeded
- Villasanta, Art. "Filipino Soldiers' Story of Korean War: Valor Redus." *Philippine Daily Inquirer*, 8 July 2012. Accessed 23 May 2017. http://newsinfo.inquirer.net/ 225235/filipino-soldiers-story-of-korean-war-valor-redux.
- Wakefield, Francis. "DND to Acquire Pohang Class Corvette Ship from South Korea." Manila Bulletin, April 27, 2017. Accessed 15 May 2017. http://news.mb.com.ph/ 2017/04/27/dnd-to-acquire-pohang-class-corvette-ship-from-south-korea/.

Online Sources

- ACQuipedia. "DOTmLPF-P Change Recommendation." Defense Acquisition University. Accessed 21 May 2017. https://dap.dau.mil/acquipedia/Pages/ArticleDetails. aspx?aid=0f017b62-6273-4d58-b02c-d72c776198e8.
- Graham, Euan. "The Hague Tribunal's South China Sea Ruling: Empty Provocation or Slow-burning Influence?" Council of Councils, 18 August 2016. Accessed 1 May 2017. http://www.cfr.org/councilofcouncils/global_memos/p38227.
- Macas, Trisha. "Despite Rhetoric: Duterte Gives Nod to PHL-US Balikatan War Games, EDCA-Lorenzana." GMA News Online, 7 November 2016. Accessed 7 April 2017. http://www.gmanetwork.com/news/news/nation/587855/duterte-gives-nodto-phl-us-balikatan-war-games-edca-lorenzana/story/.
- Office of Naval Intelligence. "The PLA Navy: New Capabilities and Missions for the 21st Century." U.S. Navy. Accessed 16 May 2017. www.oni.navy.mil.

- Office of the Press Secretary. "Remarks by President Obama to the Australian Parliament, Parliament House, Canberra, Australia, 17 November 2011." The White House. Accessed 5 February 2017. https://obamawhite house.archives.gov/the-press-office/2011/11/17/remarks-president-obamaaustralian-parliament.
- Poletti, Matthew. "Conflicting U.S. and Chinese Military Strategies." *Military Periscope*. Accessed 1 September 2016. https://apps.militaryperiscope.com.lumen. cgsccarl.com/SpecialReports/ShowReport.aspx?report=718.
- Volante, Michael J., LCDR, PN. "A Memory of the Past: Full Throttle for PN Modernization." Philippine Navy Today, posted 18 December 2015. Accessed 15 March 2017. https://web.archive.org/web/20160119215549/http://www.navy. mil.ph/news.php?news_id=1623.
- The World Factbook. "Paracel Islands." Central Intelligence Agency. Accessed 15 May 2017. https://www.cia.gov/library/publications/the-world-factbook/geos/pf.html.
- . "Philippines." Central Intelligence Agency. Accessed 15 December 2017. https://www.cia.gov/library/publications/the-world-factbook/geos/rp.html.

Papers/Reports

- Askari, Commander. "Preventing Escalation in the South China Sea Disputed Waters: A Comparative Study of the Republic of the Philippines and Socialist Republic of Vietnam." Master's thesis, U.S. Naval Postgraduate School, Monterey, CA, 2015.
- Bailey, Christopher, CDR, USN. "6 Kilos: Can Vietnamese Submarines Help Reclaim the South China Sea?" Monograph, U.S. Naval War College, Newport, RI, 2013.
- Banlaoi, Rommel. *Philippine Naval Modernization: Current State and Continuing Challenges.* Quezon City, Philippines: Philippine Institute for Peace, Violence and Terrorism Research, 2012.
- Baviera, Aileen S. P., Ph.D., and Jay Batongbacal, JSD. "The West Philippine Sea: The Territorial and Maritime Jurisdiction Disputes from a Filipino Perspective. A Primer." Asian Center for Maritime Affairs and Law of the Sea, University of the Philippines, Manila, Philippines, 15 July 2013.
- Cole, Bernard. "Vietnamese and Philippine Naval Modernization." CNA Maritime Asia Project, Workshop Two: Naval Developments in Asia, Center for Naval Analyses, Arlington, VA.

- Coughlin, James R., Maj, USAF. "United States Military Support to American Strategic Goals in the Philippines." Master's thesis, U.S. Army Command and General Staff College, Fort Leavenworth, KS, 2012.
- Cua, Celina. "Philippine Navy: Setting a Course for Greatness." Edited by Marielle Antonio. Institute for Solidarity in Asia in Partnership with the Center for International Private Enterprise, Makati City, Philippines, 2015.
- Gacal, Franco Nemesio, Col. "Territorial Disputes in the Spratly: An Assessment of the Philippine Initiatives." Master's thesis, U.S. Army War College, Carlisle Barracks, PA, 2013.
- Hardy, Corwin, LT, USN. "At Periscope Depth: Exploring Submarine Proliferation in Southeast Asia." Master's thesis, Naval Postgraduate School, Monterey, CA, 2015.
- Holmes, James, and Toshi Yoshihara. "Theory Goes to Sea: Sea-power Theory and Naval Interaction in the Asia-Pacific." Paper presented at the annual meeting of the Theory vs. Policy? Connecting Scholars and Practitioners, New Orleans, LA, 17 February 2010.
- Jane's. "Philippines Armed Forces." *Jane's Sentinel Security Assessment Southeast Asia*, posted 16 August 2016. Accessed 1 September 2016. http://janes.ihs.com.lumen.cgsccarl.com/SouthEastAsia/Display/1305078.
 - ___. "Philippines Defence Budget Overview." *Jane's Sentinel Security Assessment Southeast Asia*, posted 18 January 2016. Accessed 28 August 2016. http://janes.ihs.com.lumen.cgsccarl.com/SouthEastAsia/Display/1305077.

_. "Philippines Economy." Jane's Sentinel Security Assessment – Southeast Asia, posted 5 April 2017. Accessed 1 May 2017. http://janes.ihs.com.lumen. cgsccarl.com/SouthEastAsia/Display/1305086.

_____. "Philippines Executive Summary." *Jane's Sentinel Security Assessment – Southeast Asia*, posted 16 August 2016. Accessed 1 September 2016. http://janes.ihs.com.lumen.cgsccarl.com/SouthEastAsia/Display/1305070.

_. "Philippines Geography." Jane's Sentinel Security Assessment – Southeast Asia, posted 3 February 2017. Accessed 1 March 2017. http://janes.ihs.com.lumen. cgsccarl.com/SouthEastAsia/Display/1305072.

_____. "Philippines Navy." Jane's Sentinel Security Assessment – Southeast Asia, posted 8 October 2016. Accessed 1 November 2016. http://janes.ihs.com.lumen. cgsccarl.com/SouthEastAsia/Display/1767467.

_____. "Philippines Procurement." *Jane's Sentinel Security Assessment – Southeast Asia*, posted 10 February 2016.

_____. "Philippines Security." *Jane's Sentinel Security Assessment – Southeast Asia.* Accessed 28 September 2016. http://janes.ihs.com.lumen.cgsccarl.com/ SouthEastAsia/Display/1305094.

- St. Pierre, Matthew, MAJ, USA. "Preventing China's Rise: Maintaining United States Hegemony in the Face of a Rising China." Monograph, School of Advanced Military Studies, Fort Leavenworth, KS, 2014.
- Tran Duc Huong, Capt. "Transnational Security Challenges in Southeast Asia: The Need for Multinational Military Cooperation and Coordination in ASEAN." Master's thesis, U.S. Army Command and General Staff College, Fort Leavenworth, KS, 2014.
- Yost, Kristofer, LT USN. "Tension in the South China Sea: Why the Philippines is Challenging China's Improved Military Might." Master's thesis, U.S. Naval Postgraduate School, Monterey, CA, 2013.