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**SOVIET NAVAL STRATEGY AND  
CONTEMPORARY RUSSIAN NAVAL STRATEGY:  
IMPLICATIONS FOR U.S. NAVAL STRATEGY**

Beaird, Levi W.

Monterey, CA; Naval Postgraduate School

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# NAVAL POSTGRADUATE SCHOOL

MONTEREY, CALIFORNIA

## THESIS

**SOVIET NAVAL STRATEGY AND CONTEMPORARY  
RUSSIAN NAVAL STRATEGY: IMPLICATIONS FOR  
U.S. NAVAL STRATEGY**

by

Levi W. Beard

September 2019

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**SOVIET NAVAL STRATEGY AND CONTEMPORARY RUSSIAN NAVAL  
STRATEGY: IMPLICATIONS FOR U.S. NAVAL STRATEGY**

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Lieutenant, United States Navy  
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Submitted in partial fulfillment of the  
requirements for the degree of

**MASTER OF ARTS IN SECURITY STUDIES  
(EUROPE AND EURASIA)**

from the

**NAVAL POSTGRADUATE SCHOOL  
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## **ABSTRACT**

This thesis analyzes the naval policies of the Soviet and Russian Federation navies, examines their various shifts in naval strategy, and provides implications for future U.S. naval strategy. During most of Stalin's rule, the Soviet navy implemented a green-water naval strategy, focusing on coastal defense. Prior to his death, Stalin began to shift his navy, at least partially, to a blue-water strategy, concentrating on building his Black and Baltic Sea fleets. After Stalin's death, Admiral Gorshkov was appointed commander-in-chief of the Soviet navy and began implementing a blue-water strategy. Since the fall of the Soviet Union, Russia's navy has been in a state of disrepair. In 2017, President Putin signed the Russian Federation's most sweeping naval policy reform since the Soviet era. Many challenges, however, will prevent the Russian Federation from fully implementing its naval policy and producing a blue-water fleet. Instead, the Russian Federation will be forced to produce what they can afford: a green-water navy, submarines, and missiles. This is important for the United States because of the advances in Russian missile technology, which threaten the United States' blue-water navy. Ultimately, the high-end fight with Russia at sea will likely be in the littorals. Therefore, the United States should balance its naval forces and produce a green-water capability to challenge Russia in the littorals.



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## LIST OF ACRONYMS AND ABBREVIATIONS

|           |   |
|-----------|---|
| A2/AD     | Anti-access Area Denial   |
| AAW       | Anti-Air Warfare  |
| AIP       | Air Independent Propulsion  |
| AOR       | Area of Responsibility  |
| ASW       | Anti-submarine Warfare  |
| ASUW      | Anti-surface Warfare  |
| CG        | Guided Missile Cruiser  |
| CHAMP     | Counter-electronics High-powered Microwave Advanced Missile Program                         |
| CPGS      | Conventional Prompt Global Strike   |
| CNO       | Chief of Naval Operations   |
| COCOM     | Combatant Commander   |
| CONUS     | Continental United States   |
| CVL       | Carrier Variant Light   |
| DDG       | Guided Missile Destroyer  |
| DMO       | Distributed Maritime Operations   |
| EMP       | Electro-magnetic Pulse  |
| EU        | European Union  |
| FFG(X)    | Guided Missile Frigate  |
| GAO       | Government Accountability Office  |
| GPS       | Global Positioning Satellite  |
| ICBM      | Intercontinental Ballistic Missile  |
| INDOPACOM | Indo-Pacific Command  |
| INF       | Intermediate-Range Nuclear Forces Treaty  |
| LCS       | Littoral Combat Ship  |
| MCM       | Mine Countermeasures, Mine Countermeasures Ship, and the designator for Avenger-class ships |
| MIW       | Mine Warfare  |
| N         | Soviet November Class Submarine   |
| NATO      | North Atlantic Treaty Organization  |

|       |  |
|-------|--|
| NNFM  | New Navy Fighting Machine                |
| NSFS  | Naval Surface Fire Support               |
| PC    | Patrol Craft Coastal                     |
| PGS   | Prompt Global Strike                     |
| POL   | Petroleum, Oils, and Lubricants          |
| REB   | Russian Electronic Warfare               |
| RF    | Russian Federation                       |
| RFN   | Russian Federation Navy                  |
| SAP   | State Armament Program                   |
| SCN   | Shipbuilding and Conversion, Navy Budget |
| SLOC  | Sea Lane (or Line) of Communication      |
| STK   | Strike                                   |
| SUW   | Surface Warfare                          |
| TLAM  | Tomahawk land attack missile             |
| TTW   | Territorial Water                        |
| UK    | United Kingdom                           |
| U.S.  | United States                            |
| USN   | United States Navy                       |
| USSR  | Soviet Union                             |
| UUV   | Unmanned Underwater Vehicle              |
| VLS   | Vertical Launch System                   |
| VSTOL | Vertical and Short Take-off and Landing  |

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# **I. INTRODUCTION**

## **A. INTRODUCTION**

Prior to the selection of Admiral Sergei Gorshkov as the commander-in-chief of the Soviet Navy in 1956, the Soviet Union (USSR) was primarily focused on the development and employment of ground forces and equipment. Admiral Gorshkov was instrumental in shifting some of that focus from land to sea, by creating a world-class navy. Since the fall of the USSR, the Russian fleet has suffered severe atrophy due to economic stagnation and falling petroleum, oils, and lubricants (POL) prices, resulting in limited funding for preventive maintenance and ship acquisitions. In 2017, Russia revised its naval strategy to once again increase its fleet strength and presence, placing particular emphasis on the Arctic and on challenging the navies of the United States and China. This study compares and contrasts the naval strategies of the Soviet Union, specifically under Gorshkov, with the naval policy adopted by Russia in 2017. This thesis explores the circumstances and challenges surrounding the implementation of each and tries to find similarities between these environments, which may provide conclusions on their implementation. Additionally, this study seeks to find conclusions that may be useful in amending current U.S. naval strategy and in designing future U.S. naval strategy to combat a growing Russian naval threat.

## **B. SIGNIFICANCE OF THE RESEARCH**

This research is significant because it accomplishes three tasks. First, it compares Russia's past and current naval strategies. By examining the Soviet naval strategy, particularly during the Gorshkov era, this thesis examines why the USSR built a navy given the economic risks and costs it could impose. Navies require an exceptional amount of capital to build and a substantial amount more to man, equip, train, maintain, and employ them. Thus, the cost of Gorshkov's navy carried a significant risk to the USSR, especially during the period of economic stagnation in the 1970s. Additionally, Russia's economy has been unstable since the collapse of the USSR. While the Russian Federation has achieved some stability, it is burdened by sanctions which may interfere with its proposed naval



policy. As in the Gorshkov era, Russia currently exhibits a significant military focus on ground forces, air, and missile forces, but emphasizes the strategic role of its navy. Owing in part to national economic constraints, Russia's navy is presently limited in fleet assets and suffers from a myriad of shortcomings; however, Putin is seeking its radical transformation. Russia's 2017 naval policy provides direction to increase ship counts, enhance lethality, focus on the Arctic and littorals, and become a global deterrence to the United States through 2030. This is significant because the present strategy and economic situation bear a striking resemblance to the Soviet past.

Second, this thesis analyzes the implementation of these naval strategies. While it is a tremendous feat to formulate a naval strategy or a naval policy, it is an even greater task to see it to fruition. This study examines Gorshkov's naval strategy and assesses whether the United States may see similar results from the recently articulated new Russian Federation naval policy. As mentioned by the EUCOM commander in his address to the U.S. Senate, Russia has increased its defense spending, beginning in 2011, to approximately \$285 billion, through 2020.<sup>1</sup> This is significant because it may have implications for the future of the United States' naval fleet, whether the United States should increase its naval spending and the size of its fleet, and redefine the U. S. Navy's objectives to counter those of Russia.

Third, this thesis assesses implications for future U.S. naval strategy. A new report by the Government Accountability Office (GAO) highlights the decrease in sea ice levels in the Arctic.<sup>2</sup> It is expected that, with this decrease, there will be a significant influx of maritime activity. While the report does not identify new gaps in the U. S. Navy's material readiness, it does validate the known capability gaps which restrict surface ship operations. Current U.S. naval strategy emphasizes the need for increased assets in the Pacific to combat a growing Chinese threat, placing significant importance on the South China Sea.

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<sup>1</sup> *EUCOM Posture Statement, 2018: Statement Before the Committee on Armed Services*, 115 Cong. 2 (2018), 3, <https://www.eucom.mil/media-library/document/36271/eucom-2018-posture-statement>.

<sup>2</sup> John H. Pendleton, *Arctic Planning: Navy Report to Congress Aligns with Current Assessments of Arctic Threat Levels and Capabilities Required to Execute DoD's Strategy*, GAO-19-42 (Washington, DC: Government Accountability Office, 2018), 5. <https://www.gao.gov/assets/700/695312.pdf>.

The United States' naval strategy mentions Russia as a threat but not as a significant threat. This highlights the necessity for the U.S. Navy to revise its naval strategy to achieve greater distributed lethality, and to be prepared for Russian and Chinese threats simultaneously.

### C. LITERATURE REVIEW

The purpose of this literature review is to evaluate and contrast existing sources on the naval strategies of Gorshkov, Putin, and the United States. This review begins with Gorshkov and concludes with the United States, providing a basic overview of the many strategies, policies, and preliminary implications observed thus far.

Scholars agree that Gorshkov's primary objective was to challenge U.S. naval supremacy.<sup>3</sup> Ronald Kurth says that Gorshkov was successful in doing so because the United States vastly underestimated the capability of the USSR.<sup>4</sup> A large body of literature examines the course of the navy under Gorshkov illustrating his overall effect on the navy.<sup>5</sup> What is clear is that Gorshkov understood that to challenge the status-quo of the U.S. Navy, the Soviet Navy had to become a more substantial and balanced force.<sup>6</sup> The Soviet Navy, up to the appointment of Gorshkov, was very submarine-centric and yielded more strategic value to its Ground Forces. What does not exist, however, is a policy document resembling Putin's 2017 naval policy, for the 1960s under Gorshkov. It is from existing literature that scholars can and have detailed Gorshkov's strategy. Not until later, after the 1960s, would Gorshkov compile his thoughts into several collections of works. In a review of Gorshkov's, *Red Star Rising at Sea*, Admiral McDonald highlights the absurdity of Gorshkov's critique of the United States' expansionist "imperialist" use of its fleet for diplomatic and political objectives, noting his praise for the use of the Soviet fleet in the

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<sup>3</sup> Jessica Huckaby, "The Paradox of Admiral Gorshkov," CIMSEC, last modified October 1, 2014, <http://cimsec.org/paradox-admiral-gorshkov/13197>; Ronald J. Kurth, "Gorshkov's Gambit," *Journal of Strategic Studies* 28, no. 2 (April 1, 2005): 275–278, <https://doi.org/10.1080/01402390500088320>; Norman Polmar, *Soviet Naval Power: Challenge for the 1970s* (New York: Crane, Russak & Company, Inc., 1972).

<sup>4</sup> Kurth, 275–278.

<sup>5</sup> Office of Naval Intelligence, *The Russian Navy: A Historic Transition* (Washington, DC: Office of Naval Intelligence, 2015), <https://fas.org/nuke/guide/russia/historic.pdf>; Ronald J. Kurth, "Gorshkov's Gambit"; Polmar, *Soviet Naval Power*; Robert Herrick, *Soviet Naval Strategy* (Annapolis, MD: United States Naval Institute, 1968).

<sup>6</sup> Kurth, "Gorshkov's Gambit," 264–269.

same manner.<sup>7</sup> In short, what was not acceptable for the “imperialists” was allowable so long as the Soviets used their navy with the most exceptional purpose of spreading communist ideals and showcasing their technological and naval advancements. Gorshkov’s strategy entailed a departure from a coastal green-water focused naval strategy, to the open ocean. This open ocean strategy led to the creation of numerous blue-water assets, and many naval advancements. These advancements include the production of the first gas turbine propulsion driven ships, developments to nuclear capabilities in propulsion and missile defense systems, the creation of various platforms of submarines and torpedoes, the integration of carrier-based operations and naval aviation, a multitude of fleets and missions, expansive operations and fleet presence, and a network to support its ships at sea. While most scholars attribute Gorshkov with the success of the Soviet Navy, its build-up and advancements up until its fall, some say his efforts likely led to excessive economic burden and its eventual collapse.<sup>8</sup> What is missing from this collection of literature is a comparison between what Gorshkov had planned for the 1960s, 1970s, and 1980s, with that which materialized.

Putin’s naval strategy has been referred to by some as a return to the Gorshkov Cold War strategy.<sup>9</sup> However, according to Michael Kofman and Norman Polmar, “Russia’s surface combatant force is becoming a ‘green-water’ force.”<sup>10</sup> If it is true that Gorshkov’s strategy was to shift the Soviet fleet from its primary focus on the littorals to an open ocean navy, this statement suggests that a shift in the opposite direction is occurring for the Russian Federation, and rather than building Gorshkov’s fleet, Putin may end up building a fleet similar to Stalin’s. However, Polmar wrote in 1972 that even in his balancing

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<sup>7</sup> Sergei G. Gorshkov, *Red Star Rising at Sea*, translated by Theodore A. Neely, Jr., edited by Herbert Preston (Annapolis: Naval Institute Press, 1974), 115–121.

<sup>8</sup> Huckaby, “The Paradox of Admiral Gorshkov.”

<sup>9</sup> Dmitry Gorenburg, “Russia’s New and Unrealistic Naval Doctrine,” *War on the Rocks*, last modified July 26, 2017, <https://warontherocks.com/2017/07/russias-new-and-unrealistic-naval-doctrine/>.

<sup>10</sup> Michael Koffman and Norman Polmar, “Toward Smaller Ships and Professional Sailors,” *Proceedings* 142, no. 12 (December 1, 2016), <http://search.proquest.com/docview/1859421910/>.

strategy, the fleet under Gorshkov remained very submarine-centric.<sup>11</sup> This would imply that Putin's navy can also be a blue-water navy and submarine-centric.

It is evident from the 2017 policy that Putin is proposing what appears to be a balanced fleet, much like that which Chief of Naval Operations (CNO) Richardson is now proposing for the U.S. Navy.<sup>12</sup> Russia's policy stresses that the focus has been on maintaining a blue-water fleet, which has remained problematic for the Russian Federation since the fall of the Soviet Union. These large ships are a massive expense. Moreover, the turbines utilized for propulsion are manufactured and repaired in Ukraine. Furthermore, in recent days, Russia's sole aircraft carrier sustained significant damage in dry-dock and currently lacks the facilities necessary for repair. This incident reduces the number of Russia's capital ships from two to one.

Putin's policy seeks to accomplish many objectives, but this review will focus on three. First, it reduces the cost of the navy. Smaller ships are significantly cheaper to build and maintain. By increasing the production of these smaller ships, Moscow does shift the naval focus to littoral waters, but it also increases the number of vessels that can be dispersed. These smaller ships are designed to support enhanced capabilities. Therefore, coupled with their dispersed footprint, Putin can create a defense-in-depth and a distributed lethality type of strategy at less cost. During the Cold War, while the United States had a much greater carrier fleet than did the Soviet Union, Gorshkov focused on building carrier-killing missiles. It seems that Putin's line of thought is similar—why build expensive carriers when Russia can build long-range carrier-killing missiles, for a fraction of the cost of a carrier, that can be fitted onboard a distributed fleet of smaller warships?

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<sup>11</sup> Polmar, *Soviet Naval Power*, 31–36; Kurth, “Gorshkov's Gambit,” 275.

<sup>12</sup> John M. Richardson, *A Design for Maintaining Maritime Superiority, Version 2.0*, Washington, DC: United States Navy, 2018, [www.navy.mil/navydata/people/cno/Richardson/Resource/Design\\_2.0.pdf](http://www.navy.mil/navydata/people/cno/Richardson/Resource/Design_2.0.pdf); Russian Federation, *Fundamentals of the State Policy of the Russian Federation in the Field of Naval Operations for the Period Until 2030*, trans. Anna Davis (Newport, RI: Naval War College, 2018), 15. [https://dnnlgwick.blob.core.windows.net/portals/0/RMSI\\_RusNavyFundamentalsENG\\_FINAL%20\(1\).pdf?sr=b&si=DNNFileManagerPolicy&sig=i110Z1rxZVzKbB%2BdHJ1CZuTxvwL3N7W34%2FLpksgT1Bs%3D](https://dnnlgwick.blob.core.windows.net/portals/0/RMSI_RusNavyFundamentalsENG_FINAL%20(1).pdf?sr=b&si=DNNFileManagerPolicy&sig=i110Z1rxZVzKbB%2BdHJ1CZuTxvwL3N7W34%2FLpksgT1Bs%3D).

Second, in contrast with Gorshkov's strategy, Putin is not seeking to overtake the United States as the world's premier naval power.<sup>13</sup> The 2017 naval policy shows that Putin's focus is on overtaking China and reseating Russia as the second greatest world navy.<sup>14</sup> Critics, like Gorenburg, hold that Putin's plans are unattainable.<sup>15</sup> However, Gorshkov's strategy was tremendously more ambitious and costly, yet it was achieved. Therefore, Putin may also be successful, despite all odds, at implementing his policy.

Thirdly, Putin intends to utilize his navy as a propaganda machine, much like Gorshkov.<sup>16</sup> Gorshkov recognized that blue-water assets and large fleets were effective at communicating the Soviet Union's intent and projecting power, but these assets were also intended to challenge the perceptions of other nations about communism and the USSR. Gorshkov noticed that foreign nations were more inclined to allow large ships than smaller ones into their ports. Thus, large ships became vessels of diplomacy that could eventually open doors for international cooperation and the spread of communist ideals.<sup>17</sup> While Putin is not advocating the spread of communist principles, he intends to utilize his naval fleet to promote respect for Russia abroad, while also exploiting it to enhance civil-military relations at home.

Recent U.S. naval strategies are imprecise. In 2015, the United States released *A Cooperative Strategy For 21st Century Seapower*. This document lists a series of objectives by Combatant Commander (COCOM), and more importantly, highlights a reorganization of the navy to include the shift of blue-water assets to Indo-Pacific Command (INDOPACOM) to counter rising threats in 7th Fleet. While there are significant threats in the 7th Fleet area of responsibility (AOR), the significance of Russia as a threat has been downplayed, missed, or omitted, at least until recently. In *The Future*

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<sup>13</sup> Michael Koffman and Jeffrey Edmonds, "Why the Russian Navy Is a More Capable Adversary Than It Appears," *National Interest* (blog), last modified August 22, 2017, <https://nationalinterest.org/feature/why-the-russian-navy-more-capable-adversary-it-appears-22009?nopaging=1>.

<sup>14</sup> Russian Federation, *Fundamentals of the State Policy of the Russian Federation*, 13.

<sup>15</sup> Gorenburg, "Russia's New and Unrealistic Naval Doctrine."

<sup>16</sup> Russian Federation, *Fundamentals of the State Policy of the Russian Federation*, 8.

<sup>17</sup> Gorshkov, *Red Star Rising at Sea*, 113–121.

*Navy*, CNO Richardson assesses both Russia and China as formidable threats across many domains. Admiral Richardson advocates more naval assets, both manned and unmanned to counter, and insists on the adoption of technologies more rapidly. His assessment does seek to address existing capability gaps faced by the U.S. armed forces. Other scholars have assessed the gaps in current U.S. naval strategy and provide possible solutions. One scholar is CAPT (Ret.) Wayne P. Hughes. In his collection of works on *Fleet Tactics* and in his study *The New Navy Fighting Machine: A Study of the Connections Between Contemporary Policy, Strategy, Sea Power, Naval Operations, and the Composition of the United States Fleet* (NNFM), CAPT Hughes emphasizes the necessity of a more numerous fleet for tomorrow's naval operations.<sup>18</sup> He says this fleet should consist of blue and green-water assets, and that the present number of blue-water assets should not considerably change from its current numbers. The green-water fleet, however, should consist of smaller vessels with capabilities to fight in the contested. The total combined strength of blue and green-water assets under this school of thought could affordably reach approximately 600 ships. This thesis will further build on his framework and seek to highlight the significant strategic options these force assets could provide in strength and capability, while also highlighting the additional benefits provided to sailors, officers, and COCOMs. Particular emphasis will be placed on countering the growing Russian threat and providing implications for the development of future U.S. naval strategy.

#### **D. POTENTIAL EXPLANATIONS AND HYPOTHESES**

This thesis investigates the hypothesis that the Soviet naval buildup contributed to the economic and political crisis in the USSR in the 1980s. The USSR began to develop a massive naval fleet rivaling the U.S. Navy during a time of economic gain, in its post-war economy, regardless of the potential economic risks such a fleet could impose. By the 1970s, the economic climate began to change; it stagnated. While the Soviet naval fleet

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<sup>18</sup> Wayne P. Hughes, *The New Navy Fighting Machine: A Study of the Connections Between Contemporary Policy, Strategy, Sea Power, Naval Operations, and the Composition of the United States Fleet*, NPS-OR-09-002 (Monterey, CA: Naval Postgraduate School, 2009); Wayne P. Hughes, *Fleet Tactics and Coastal Combat*, 2<sup>nd</sup> ed. (Annapolis, MD: Naval Institute Press, 2000); Wayne P. Hughes and Robert P. Girrier, *Fleet Tactics and Naval Operations*, 3<sup>rd</sup> ed. (Annapolis, MD: Naval Institute Press, 2018).

was a tremendous instrument of propaganda that conveyed to enemies, allies and potential allies that the USSR was a world player, on par with the United States, it was also an incredibly expensive venture which would have lasting effects. Thus, Gorshkov's naval strategy contributed to the collapse of the Soviet Union.

Russia is now actively pursuing the destabilization of the North Atlantic Treaty Organization (NATO), notably in the Baltic region. Beginning with the annexation of Crimea in 2014 and the most current Ukraine crisis, including the seizure of Ukrainian naval assets in the Kerch Strait, Russia is making strategic moves to recapture territory and cause fissures in the NATO alliance. This move not only increases the buffer zone between Russia and NATO states, but it also increases the number of ports available to the Russian navy in the Black Sea and captures the economic benefits of commerce that had been enjoyed by Ukraine. Tactically, this territorial grab extends the radar umbrella for Russia's advanced missile systems, which are intended to limit the access of other nations to areas of strategic importance to Russia. Russia's navy currently suffers from a lack of shipbuilding facilities to construct, repair and maintain vessels. Annexing Ukraine would provide the Russian Navy the ports and major shipbuilding facilities lost during the collapse of the Soviet Union. Ukraine is the sole supplier of the gas turbines which Russia uses for its naval propulsion plants. Reannexing Ukraine would provide the facilities necessary for repair, maintenance and shipbuilding. The annexation of Ukraine could resolve these premier issues currently faced by the Russian Navy and provide strategic and economic benefit to Russia; however, it could also result in the imposition of additional Western sanctions and result in the curtailment of economic ties with members of the European Union (EU) and NATO. This move could be interpreted as Russia seeking to reestablish its Cold War empire and could lead to Russian aggression in the Baltic region if NATO and the EU failed to respond. Failure to resolve the Ukraine crisis could cast doubt on the effectiveness of NATO and could support Russia's agenda of creating a divide within the alliance.

Furthermore, this thesis also investigates the hypothesis that because the United States has underestimated Russia as a naval threat, it must therefore update its naval strategy. Russia's 2017 naval policy is dissimilar to the Gorshkov strategy. Gorshkov was

primarily focused on overtaking the U.S. Navy. The 2017 policy does not seek to unseat the United States, but to surpass China in naval dominance. For Gorshkov, a massive fleet projected power and achieved political ends. One of his many achievements was not only seen in the exponential growth of the Soviet Navy, but also its balancing and shift from a predominately green-water fleet to an open ocean blue-water fleet. Conversely, the 2017 policy elevates the necessity of a green-water fleet, which is more pre-Gorshkov in nature. Both strategies emphasize the necessity of assets for the undersea domain, nuclear and missile capabilities, naval aviation, and the overall strength of the navy. Because the United States' attention has largely been placed on INDOPACOM, Russia has been neglected. To counter the growing Russian threat, the United States should adopt a naval strategy that incorporates the use of green-water and blue-water assets and deemphasizes the further development of expensive carriers. By developing green-water assets, the United States would further disperse its lethality, and would not only be more effective against Russia in the Baltic, Aegean and Black Seas, but the United States would also be more effective against threats imposed by China and Iran.

Finally, this thesis argues that the United States should change its policy regarding the purchase of warfare assets produced only in the United States. The United States currently allows the sale of its F-35, and other assets, to NATO allies. Through this bilateral sales agreement, the United States could strengthen its partnerships by allowing for the purchase of naval assets from its NATO allies, and enhance shared NATO trade and economic benefits. As one example, the United Kingdom (U.K.) has reliable minesweepers and mine-hunters. Having seen their operation first-hand and having been employed on an aging U. S. Avenger-class Mine Countermeasures (MCM) platform, I know the British were able to more frequently and reliably, make exercise and operational commitments; contrarily, U.S. MCMs, were incapable. Not only is the Avenger-class MCM aging, but parts are rare, some must be fabricated, repair costs are astronomical, and the platform will be in a state of disrepair until it is retired. Newer British and NATO platforms have already been developed and are more reliable. Furthermore, the Littoral Combat Ship (LCS) is not a viable replacement due to its cost, structure, poor reliability, and the many years remaining for the development of an MCM package for the platform.



## **E. RESEARCH DESIGN**

This research compares and contrasts naval strategy during two distinct eras in Russia's history. It employs a systematic approach, providing analysis of Soviet strategy with contemporary Russian naval policy, and details their implementation. It draws from primary sources including the translated works of Gorshkov and Russian Federation documents and secondary sources, articles, journals, and studies. Then, it provides conclusions for shaping a U.S. naval strategy which confronts the rising threat of Russia.

## **F. THESIS OVERVIEW AND CHAPTER OUTLINE**

This research is divided into four parts. This first chapter has addressed the significance of the research and provided possible hypotheses. The second chapter provides analysis of Soviet naval strategy beginning in the early 1920s through the fall of the Soviet Union and details its implementation. The third chapter focuses on contemporary Russian naval policy, what it is, its implementation, and its potential challenges and constraints. The final chapter provides conclusions for the development of future U.S. naval strategy.

## II. SOVIET NAVAL STRATEGIES AND GORSHKOV

During his twenty-nine-year tenure, from 1956 to 1985, as commander-in-chief of the Soviet Navy, Admiral Gorshkov created a world-class navy intent on rivaling the U.S. Navy for dominance at sea. He transformed the navy from a green-water navy to a global, blue-water navy. He facilitated the creation of many technological innovations and advancements, such as the creation of nuclear propulsion systems and nuclear submarines, and advanced nuclear-tipped ballistic and cruise missiles. Additionally, Gorshkov was an avid historian and believed, much like Mahan, that naval strategy should be developed from previous battles, assessing and exploiting the weaknesses of enemies. This chapter explores the shifts in Soviet naval strategy leading up to Gorshkov's appointment to office and the naval strategy he employed.

### A. COMPETING NAVAL STRATEGIES

Soviet naval strategy shifted on numerous occasions during the period from the early 1920s until 1956, when Gorshkov ascended to the office of commander-in-chief of the Soviet Navy.<sup>19</sup> It should be noted that most of these shifts in strategic thinking are inextricably linked to the Soviet Union's economic condition at that time; thus, its fleet structure and employment were directly tied to economic factors and constraints. However, these constraints were challenged by Soviet ambitions, especially by Gorshkov. Despite constraints, Gorshkov achieved what seemed quite impossible. Highlighting these shifts, in *Soviet Naval Strategy*, Robert Herrick says that two primary schools of naval thought existed in the Soviet Union by the early 1930s.<sup>20</sup> The old school, which had been dominant up until the time of Trotsky, espoused "a command-of-the-sea doctrine that was slightly modified from the tenets of Mahan."<sup>21</sup> The old school maintained that large blue-water ships, like battleships in the Royal Navy's Grand Fleet, were essential to dominance at sea. Alternatively, the young school (or new school) "asserted that the submarine had replaced

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<sup>19</sup> Herrick, *Soviet Naval Strategy*, 3–27.

<sup>20</sup> Herrick, 9.

<sup>21</sup> Herrick, 9.

the battleship as the main striking unit of the fleet.”<sup>22</sup> The young school advocated for a coastal defense fleet consisting of “submarines, PT boats, and destroyers” and was notably more attractive because it was more budget sensitive and practical.<sup>23</sup>

The first three Five Year plans and the New Economic Policy period exhibit shifts in Soviet strategic thinking. By 1919, the Soviet Navy was exceptionally dilapidated. “The Baltic Fleet had only a few operational ships,” the “Black Sea Fleet was virtually non-existent,” and there were “no major warships in the Arctic or Pacific.”<sup>24</sup> The strength of the Soviet Navy was “one dreadnaught, plus eight destroyers and some smaller craft.”<sup>25</sup> In 1921, a motion was introduced during the Tenth Party Congress by Fiodor Raskolnikov for the rehabilitation of the Soviet fleet.<sup>26</sup> This resulted in an increased strength by 1924, to “three battleships, five cruisers, 24 destroyers, and 18 submarines, plus lesser craft.”<sup>27</sup> Although the rehabilitation plan was successful, in 1923, the New Economic Policy redirected naval funding to “the reestablishment and improvement of [the] economy.”<sup>28</sup> According to Herrick, the cuts were so drastic “that the total expenditure for ship repair and construction was less than for clothing allowances.”<sup>29</sup> Herrick says that it was during this time, from 1921 to 1924, that the Soviet Navy adopted “a strategy of passive defense, utilizing nearly immobile ships and coastal fortifications,” or rather, a “fleet in being.”<sup>30</sup> While there was no transition from the old school to the young school at this time, there was a shift in emphasis from building a Grand Fleet to economic repair.

By October 1928, a year after Stalin had come into power, the First Five Year Plan was established. It was at this time, Polmar says, that the “‘old school’ of naval strategy

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<sup>22</sup> Herrick, 21–22.

<sup>23</sup> Herrick, 21–22.

<sup>24</sup> Polmar, *Soviet Naval Power*, 7.

<sup>25</sup> Polmar, 7.

<sup>26</sup> Herrick, *Soviet Naval Strategy*, 11; Polmar, *Soviet Naval Power*, 7.

<sup>27</sup> Polmar, 9.

<sup>28</sup> Herrick, *Soviet Naval Strategy*, 11.

<sup>29</sup> Herrick, 11.

<sup>30</sup> Herrick, 12.

that called for an oceangoing fleet was being discredited and would be ‘eliminated’ by 1932.”<sup>31</sup> The First Five Year Plan only called for the addition of five submarines due to the limited availability of shipping facilities and funding.<sup>32</sup> The Second Five Year Plan, implemented between 1933 and 1937, was the beginning of a shift from a young school strategy back to the old school. During this time the Soviets constructed their “first major surface warships,” but relied on foreign assistance, from the Italians, to do so.<sup>33</sup> Additionally, the Second Five Year Plan provided for the rehabilitation of older surviving battleships and the construction of cruisers.<sup>34</sup> Polmar says that it was not until 1935 that Stalin would officially, but “secretly,” accept an oceangoing fleet strategy.<sup>35</sup> In 1937, the Third Five Year Plan was instituted and called for the “accelerat [ion] [of] the construction of shipyards already begun for the building of ships for the high-seas fleet.”<sup>36</sup> Additionally, Admiral Kuznetsov was appointed as commander-in-chief of the Soviet Navy and advocated an oceangoing fleet comprised of battleships, heavy cruisers, a large number of submarines and a variety of other surface warships, which further supported Stalin’s mission.<sup>37</sup> While Stalin still kept secret his intentions to transition from a coastal fleet to an oceangoing fleet, attacks on Russian merchant shipping by Italian submarines in August of 1937 provided him further “justification for developing an oceangoing navy.”<sup>38</sup> The attacks showed that while the Soviets could provide materials for war, they did not possess the means to protect their own vulnerable shipping.<sup>39</sup> The attacks elicited a response from the international community, which convened at Nyon, Switzerland, and formed a patrol of British and French ships to hunt Italian submarines.<sup>40</sup> It was around this time that Stalin

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<sup>31</sup> Polmar, *Soviet Naval Power*, 9.

<sup>32</sup> Polmar, 9.

<sup>33</sup> Polmar, 10.

<sup>34</sup> Polmar, 10.

<sup>35</sup> Polmar, 10.

<sup>36</sup> Herrick, *Soviet Naval Strategy*, 40.

<sup>37</sup> Polmar, *Soviet Naval Power*, 11.

<sup>38</sup> Polmar, 11–12.

<sup>39</sup> Polmar, 11–12.

<sup>40</sup> Polmar, 11–12.

began to purge thousands of naval officers and rebuild his military to establish his old school naval policy, with aspirations of building a fleet that could rival the U.S. Navy. By 1941, the “Soviet Navy could muster three pre-World War I battleships, ten cruisers (only two of recent construction), 66 destroyers (half of them new), and 218 submarines.”<sup>41</sup>

World War II also had a significant impact on Soviet naval strategy. With the invasion of Nazis into the Soviet Union, the transition from a young school to an old school naval strategy was halted.<sup>42</sup> The Soviet Navy was forced into a defensive role and subservient to the Army. Three critical areas of concern were the Arctic, the Baltic Sea and the Black Sea. The role of the Soviet Navy, according to Herrick, was to provide support for ground offensives against Germany in Eastern Europe, to be an escort for convoys, and to act as a “fortress fleet” providing defense for major cities. The fleet’s primary function, however, was to provide support for Soviet ground troop movements. In port, sitting fleets were susceptible to attacks by German aircraft and submarines. Minefields in the Gulf of Finland damaged or destroyed new cruisers, many small craft, and sank “nine new destroyers.”<sup>43</sup> The Black Sea Fleet was largely uncontested and met with success in attacking Axis shipping in the Black Sea; however, the Germans were able to eventually capture Sevastopol and Novorossiisk by land. Initial attempts at amphibious landings by the Black Sea Fleet at Novorossiisk were unsuccessful; later attempts were successful and resulted in recapture of Kerch.<sup>44</sup> The Arctic waters were largely untested because of a lack of German naval presence.<sup>45</sup> Ships sunk in port were utilized as battery defenses. What became evident to the Soviets at the outset of World War II, according to Herrick, is that if the Soviet Navy had aircraft carriers, it could have provided a better defense for its fleet against German forces and led more successful offensives.<sup>46</sup> Despite the toll of the war on

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<sup>41</sup> Polmar, 13–14.

<sup>42</sup> Herrick, *Soviet Naval Strategy*, 47–56.

<sup>43</sup> Herrick, 40–48.

<sup>44</sup> Normal Polmar, Thomas A. Brooks, and George E. Fedoroff, *Admiral Gorshkov: The Man Who Challenged the U.S. Navy* (Annapolis, MD: Naval Institute Press, 2019), 75–77.

<sup>45</sup> Herrick, *Soviet Naval Strategy*, 50–51.

<sup>46</sup> Herrick, 47–56.

the economy, the rationing of food for his people, and destruction of shipbuilding infrastructure and cities during the war, Stalin continued his press to return to an old school strategy to counter, what he believed would be the inevitable—Allied expansion into Soviet territories.<sup>47</sup> “The Soviet people [will] wish to see their fleet grow still stronger and more powerful,” declared Stalin.<sup>48</sup>

In 1953, Stalin died, “and with him were buried the plans to build a conventional Soviet Navy that would rival the United States.”<sup>49</sup> Polmar notes that after Stalin’s death the Soviet Union became ruled by committee, which almost instantaneously resulted in the “immediate [e] halt [ing] [of] construction of large warships, and directed a shift of shipbuilding resources to submarines and merchant ships.”<sup>50</sup> Thus, the transition initiated by Stalin to impose an old-school strategy was halted and a new school strategy was initiated.

On January 6, 1956, Admiral Gorshkov was appointed commander-in-chief of the Soviet Navy and was determined to enact a blue-water strategy. However, another setback loomed—Khrushchev. Khrushchev desired to make drastic cuts to the Soviet Navy, cutting the surface fleet by as much as 90 percent.<sup>51</sup> He was convinced that the Soviet Navy should be composed of submarines, small vessels, and aircraft armed with nuclear missiles, and that conventional surface ships no longer occupied a role in naval strategy. The effects of which are evident in the Cuban Missile Crisis. During that time, the Soviet Navy was unable to provide a suitable escort for its container ships supplying arms to Cuba.<sup>52</sup> Additionally, the submarines that were to provide Atlantic patrols were mechanically unreliable. Several of which, upon leaving port, suffered propulsion limiting issues and had

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<sup>47</sup> Polmar, Brooks, and Fedoroff, *Admiral Gorshkov: The Man Who Challenged the U.S. Navy*, 75–77.

<sup>48</sup> Polmar, Brooks, and Fedoroff, 76.

<sup>49</sup> Polmar, *Soviet Naval Power*, 31.

<sup>50</sup> Polmar, 31.

<sup>51</sup> Herrick, *Soviet Naval Strategy*, 67–71; Polmar, Brooks, and Fedoroff, *Admiral Gorshkov: The Man Who Challenged the U.S. Navy*, 126–135.

<sup>52</sup> Polmar, Brooks, and Fedoroff, 128.

to be tugged back to port.<sup>53</sup> These events further highlighted the necessity of a reliable blue-water fleet.

This cursory glance of Soviet history is intended to summarize the various changes in early Soviet naval strategy. Whichever strategy was dominant dictated the class of ship being built and further facilitated the shift from a green-water littoral strategy to one of oceangoing dominance at sea. The overall strength of the navy was increasing in step with the post-war economic recovery, but the Soviet Navy was still weak in comparison to the U.S. Navy and would remain so until several years after Gorshkov's appointment to office. It is noteworthy that Gorshkov saw the folly and strength in both the old and new positions, the errors in Mahan's strategy, he observed lessons from history, and he exploited these to produce a world class navy.

## **B. GORSHKOV**

When Gorshkov took office, the U.S. Navy was a global and nuclear force, exercising dominance at sea. The U.S. Navy relied heavily on the employment of submarines and carrier groups to keep the sea lanes of communication open and to maintain freedom of navigation on the seas. Conversely, the Soviet Union had devalued the role of the navy and emphasized the importance of a strong army. That would soon change. Polmar says that in 1956 the "Soviet leadership now realized that they must have strategic and conventional military forces to be in fact a superpower."<sup>54</sup> It had taken several naval incidents, such as the Suez altercation and the landing of forces in Lebanon, in which the Soviets were unable to intervene, to change their minds. Therefore, began the implementation of Gorshkov's strategy: to create a fleet to rival the U.S. Navy and challenge its strategy of sea dominance. Gorshkov would seek to accomplish this strategy diplomatically, ideologically, and militarily.

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<sup>53</sup> Polmar, Brooks, and Fedoroff, 128.

<sup>54</sup> Polmar, *Soviet Naval Power*, 39.

## 1. NAVAL DIPLOMACY

The Soviet Navy became an instrument of diplomacy. Gorshkov understood the valuable diplomatic function of a navy both in peacetime and war. During his time, Gorshkov boasted “our warships are calling with continually greater frequency at foreign ports, fulfilling the role of ‘plenipotentiaries’ of the Soviet countries.”<sup>55</sup> Soviet sailors were ambassadors for the Soviet Union, busy making “friendly contacts with representatives of the most diverse strata of population of our country.”<sup>56</sup> Diplomacy was instrumental in building alliances; it also opened ports for fuel and stores. Pulling into port was an opportunity to showcase the latest in Soviet naval technologies and capabilities, and to “convincingly [spread] the ideas of the Communist ideology and culture, and about the Soviet way of life to the masses of peoples of other states.”<sup>57</sup>

## 2. AN IDEOLOGICAL NAVY

The Soviet Navy was a vessel of Communist propaganda. According to Gorshkov, the bourgeois navies of the West were utilized as weapons of “state policy in peacetime, which permitted them to enslave underdeveloped peoples and countries overseas and transform them into their own colonies.”<sup>58</sup> Gorshkov knew, based on an abundance of historical examples of British and American imperialist expansion, that nations with strong navies became great powers, and nations that lacked strong navies would not last as great powers.<sup>59</sup> These great powers, America and Great Britain, often utilized their navies for the exploitation of other nations and their resources, the spread of democracy, and their own national gain. Gorshkov, who studied Mahan, likely recalled his words frequently, “I might say I was up to 1885 traditionally an anti-imperialist; but by 1890 the study of the influence of sea power and its kindred expansive activities upon the destiny of nations had

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<sup>55</sup> Gorshkov, *Red Star Rising at Sea*, 119.

<sup>56</sup> Gorshkov, 119.

<sup>57</sup> Gorshkov, 119.

<sup>58</sup> Gorshkov, 8.

<sup>59</sup> Gorshkov, 4.



converted me.”<sup>60</sup> Knowing that the U.S. Navy was highly influenced by Mahan, Gorshkov emphasized that U.S. naval action was, in essence, the bourgeoisie capitalists seizing the means of production from the communist proletariat. According to Gorshkov, then, the U.S. Navy was a tool of imperialists to impose naval dominance at sea, to control or seize shipping, resulting in significant impacts to local economies. For Gorshkov, the answer to this oppression must be a great Soviet fleet that could champion the ideals of Communism and be an “instrument of deterrence to the aggressive acts of the imperialists.”<sup>61</sup> The best placement for this Soviet fleet was the Mediterranean. Gorshkov sought to capitalize on the anti-American, anti-British and anti-French sentiment in the surrounding states that had once been colonized or felt oppressed. He believed that the presence of his fleet would display that the Soviet Union would not intervene in inner conflicts in the region, like the imperialist “expansionary, antidemocracy, and policemen policy.”<sup>62</sup> A Soviet fleet was to convey a narrative of deliverance. It was a nation’s hope to be delivered by the Soviet Union from the yoke of their oppression under the tyrannical rule of the United States and British. It was the classic narrative of good versus evil, and Gorshkov was convinced that the presence of the Soviet Fleet would be a means of proclaiming the Communist gospel and result in the proselytization of nations.

Navies communicated prestige.<sup>63</sup> Gorshkov firmly believed that “Nav [ies] [possess] the capability to vividly demonstrate the economic and military might of a country beyond its borders during peacetime.” Gorshkov, on the placement of surface forces in the Mediterranean, said the navy was conducting a “policy of peace and friendship [which is] being conducted by the Soviet state.” In 1971 the United States maintained a presence in the Mediterranean. By placing the Soviet fleet in the Mediterranean, in the presence of the U.S. Navy, Gorshkov communicated Soviet economic and naval legitimacy to the United States and the watching world; It showcased the might of Communism

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<sup>60</sup> Alfred Thayer Mahan, “The Growth of Our National Feeling,” in *The World’s Work*, vol. III (New York: Doubleday, Page & Company, 1901) 1764.

<sup>61</sup> Gorshkov, *Red Star Rising at Sea*, 114.

<sup>62</sup> Gorshkov, 1–8.

<sup>63</sup> Gorshkov, 21.

against Capitalism. Gorshkov reinforced this point during the Yom-Kippur War in October-November, 1973, when he deployed approximately ninety-six naval assets to the Mediterranean, compared to the sixty or sixty-five United States assets on station in the Mediterranean.<sup>64</sup> The increased visibility of the Soviet Fleet communicated its place as a top-tier navy, and it challenged the capabilities of the U.S. Navy.

Soviet writings and media were not reserved only for external audiences. A major target audience was the domestic consumer. It is said that much of Gorshkov's writings were intended for naval officers, the Soviet public, and the Committee. According to Robert Bathurst, "Admiral Gorshkov's articles were correctly understood to be a signal for propagandizing the international role of the Soviet Navy."<sup>65</sup> This meant that Gorshkov's writings were an announcement to the public and military, for their buy-in, of the new policy positions that were being implemented and championed globally. The Soviets also utilized propaganda for training their military. Bathurst notes that the Soviet Officer Handbook was created to ensure that there were no philosophical dissidents and that all were of one mind, and against a common enemy.<sup>66</sup>

### 3. A BLUE-WATER FLEET

Gorshkov's navy was an incredible feat. The Soviet Navy, as compared to the navy Stalin began to build before his death, experienced significant growth and diversification under Gorshkov; however, it began with a series of challenges. At the beginning of his time in office, Khrushchev had ordered Gorshkov to cease the production of blue-water assets and to focus production of "relatively inexpensive types, notably submarines, light surface craft, and land-based naval aircraft" promoting a shift from the old school back to the young school of naval thought.<sup>67</sup> Khrushchev believed that as long as these assets had nuclear

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<sup>64</sup> Office of the Chief of Naval Operations, *Understanding Soviet Naval Developments*, NAVSO P-3560 (Washington, DC: Office of the Chief of Naval Operations, Dept. of the Navy, 1991), 14; Polmar, *Soviet Naval Power*, 67.

<sup>65</sup> Robert B. Bathurst, *Understanding the Soviet Navy: A Handbook* (Newport: Naval War College Press, 1979), 7.

<sup>66</sup> Bathurst, *Understanding the Soviet Navy*, 12–13.

<sup>67</sup> Herrick, *Soviet Naval Strategy*, 67.

capabilities, the Soviet Fleet could challenge the nuclear capabilities of United States and NATO forces.<sup>68</sup> By 1959, Khrushchev ordered the “scrapping of 90 percent of [the Soviet Union’s] cruisers” and insisted that any further use of cruisers should be for the use of officials only.<sup>69</sup> It would take a few years of campaigning, published editorials, the Cuban Missile Crisis, and several international altercations (at sea) in which the Soviet Union could not intervene (Suez and Lebanon), to persuade Khrushchev and the Party to adopt an oceangoing fleet. Growth of the Soviet Fleet was swift. By 1974, the Soviet’s active fleet, not including auxiliaries, was estimated at three times the size of the United States’ Navy.<sup>70</sup>

Having finally convinced the Soviets to produce a blue-water fleet, Gorshkov implemented his naval strategy. He believed that in order to challenge United States’ dominance at sea, and for the Soviet Union to become a great power, he needed a sizable navy. He believed this navy had to target the weaknesses and strengths of its foe. According to Gorshkov in *The Sea Power of the State* and *Red Star Rising at Sea*, the dominant threat against the Soviet Union was the United States.<sup>71</sup> The United States was a nuclear power, enjoyed dominance at sea, and maintained an impressive strike capability. Carriers and submarines were the principal assets of the U.S. Navy. Both represented a clear nuclear and conventional strike threat. For this reason, Gorshkov dedicated resources to the development of nuclear and other technological capabilities. In 1958, the Soviet Union produced its first nuclear “N” (November) class submarine.<sup>72</sup> Soon after the Soviets developed nuclear weapons at sea in the form of anti-ship missiles, anti-submarine rockets, torpedoes, and ballistic and cruise missiles. The purpose of these developments was to destroy the United States’ aircraft carriers and to project power ashore without the need of aircraft carriers of their own.<sup>73</sup> Gorshkov, likely due to cost, avoided building carriers. At

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<sup>68</sup> Herrick, 67.

<sup>69</sup> Polmar, *Soviet Naval Power*, 33.

<sup>70</sup> Polmar, 114.

<sup>71</sup> Gorshkov, *Red Star Rising at Sea*, 128–129.

<sup>72</sup> Polmar, *Soviet Naval Power*, 35; Sebastien Roblin, “Russia’s First Nuclear Attack Submarine Was a Real Killer (Of Lots of Russian Sailors)”, *National Interest* (blog), January 15, 2017, <https://nationalinterest.org/blog/the-buzz/russias-very-first-nuclear-attack-submarine-was-real-killer-19061>.

<sup>73</sup> Gorshkov, *Red Star Rising at Sea*, 130.

sea, carriers needed dedicated assets for their protection. Carriers were costly, and Gorshkov knew that they would not only take years to build, but also years to produce carrier competent aviation assets. Carriers, then, were not cost-effective, but, nuclear-tipped carrier killing missiles were. The development of nuclear submarines provided the Soviets with extended range and speed over the older diesel class submarines. Like those of the United States, the Soviet nuclear submarine was dynamic in its strike capability. As World War II had proven, the role of the submarine was tremendous. The Germans intercepted numerous shipping vessels, surface, and subsurface units and deprived economies by cutting sea lanes (or lines) of communication (SLOC). In Gorshkov's strategy, submarines would not only help guard the littorals; they would serve as nuclear deterrence, nuclear defense, were a significant threat to NATO countries' shipping and SLOCs, and effective anti-surface and anti-submarines platforms.

Gorshkov developed a number of surface platforms capable of carrying a wide array of weapons.<sup>74</sup> Surface ships provided a wide assortment of capabilities, anti-submarine warfare (ASW), anti-surface warfare (ASUW), anti-air warfare (AAW), strike (STK), naval surface fire support (NSFS), and amphibious landing capabilities.<sup>75</sup> Other improvements increased the surface force's over the horizon targeting capabilities, emitter emissions control, speed, maneuverability and stay time. Aviation was not the strongest Soviet force; however, Gorshkov had observed the role of aviation assets in United States' ASW and ASUW missions and adapted platforms to support. Additionally, while no carrier was created until 1990 (one, the Admiral Kuznetsov), the Soviet Union did produce several vertical and short take-off and landing (VSTOL) and helicopter carriers. Before the collapse of the Soviet Union, the Soviets produced two Moskva-class helicopter carriers and four Kiev-class aircraft cruisers, likely because of cost, their vulnerability at sea, and the additional requirement of surface forces for escort and protection.<sup>76</sup> Additionally,

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<sup>74</sup> Gorshkov, 131.

<sup>75</sup> Gorshkov, *The Sea Power of the State* (Annapolis: Naval Institute Press), 214–217.

<sup>76</sup> Kyle Mizokami, "Russia's Super Strange Kiev-Class Aircraft Carriers: Submarine and Carrier Killer?", *National Interest* (blog), August 18, 2017, <https://nationalinterest.org/blog/the-buzz/why-nato-feared-russias-kiev-class-aircraft-carriers-21972>.

Gorshkov created an auxiliary component. Polmar notes, “by 1974, the Soviet Union had one of the world’s fastest growing merchant marines, rating as the second or third largest in numbers of oceangoing ships, and sixth largest in terms of carrying capability.”<sup>77</sup> Some of these would serve as fleet support vessels for fuel and stores, but also as vessels of diplomacy providing aid to nations like Cuba.<sup>78</sup> Gorshkov also maintained an affinity for oceanography and exploration, dedicating a portion of his writing in *Red Star Rising at Sea* to describing its value for its economic contributions via the resources the sea possesses. These factors combined to achieve “a modern navy [which] possesses universality and mobility and is capable of concentrating strike power which may be used not only for fighting a sea foe but also in the sphere of operations of other branches of the armed forces.”<sup>79</sup>

In line with his intention, to rival the U.S. Navy for dominance at sea, Gorshkov strategically placed his ships in the major fleet areas of the Atlantic, the Pacific, the Indian, the Arctic, and in the Mediterranean and Caribbean Seas. The Atlantic, according to Gorshkov, “is of prime importance for shipping and international trade” and also possesses significant military importance to NATO.<sup>80</sup> Cutting off trade in the Atlantic would not only affect the American and European economies, but it would also disrupt military support between the NATO allies and expose the Eastern coastline to a nuclear threat.

Gorshkov stationed ships in the Pacific for much of the same reasons. The Pacific is host to major international shipping ports and SLOCs. Disruption to the Pacific SLOCs could impose a significant strain on the economies of the United States and its Pacific allies. Gorshkov also noted that the Pacific coast is “the location of many centres of the atomic missile and aviation industries, shipbuilding, production of synthetic rubber, aluminum, etc.”<sup>81</sup> Gorshkov’s objective was not only to disrupt the flow of international

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<sup>77</sup> Polmar, *Soviet Naval Power*, 74.

<sup>78</sup> Polmar, 76.

<sup>79</sup> Gorshkov, *The Sea Power of the State*, 222.

<sup>80</sup> Gorshkov, 11–12.

<sup>81</sup> Gorshkov, 14.

traffic but to threaten American commercial and defense industries, as well as to project a nuclear threat onto the American coasts, and more specifically its citizens.

The Indian Ocean provided access to the oil-rich nations in the Arabian Gulf, as well as access to strategic chokepoints. By controlling the Indian Ocean, Gorshkov could seize the SLOCs and disrupt the flow of oil to the imperialist countries. By controlling the strategic chokepoints, the Bab el Mandeb and the Strait of Hormuz, Gorshkov could restrict access into the Mediterranean, Red Sea and the Arabian Gulf.

The Arctic was especially significant. Not only is its environment particularly harsh and frozen for most of the year, but it also possessed the elements of Gorshkov's bastion defense and the shortest sea and "air routes between Eurasia and the American continent."<sup>82</sup> For this reason, Gorshkov knew he possessed both a tactical and strategic advantage in the Arctic. The United States did not possess enough icebreakers to enjoy the same level of operation that the Soviet fleet could. This provided Gorshkov the economic benefits that the Arctic could provide.<sup>83</sup> Second, the United States' fleets were not accustomed to the environment, and with the improving range of its nuclear intercontinental ballistic missiles (ICBMs), not much could deter the threat of a nuclear strike from the Arctic. Third, the northern border of the Soviet Union is also the largest land mass bordering the Arctic.

A nuclear armed fleet in the Mediterranean was significant for a variety of reasons. First, it was a high form of propaganda. As mentioned before, placing more ships in the Mediterranean than the United States in 1973 was intended to communicate a variety of messages, and superiority was one of them. Not only could the United States be outnumbered, but the Soviets could also project nuclear threats in-shore on many European nations and major cities. It was propaganda for the Soviet cause, communicating the superiority of the Soviet system over Western democracy and capitalism. Second, controlling the Mediterranean would also give Gorshkov access to the Suez, another strategic chokepoint, one which in earlier years the Soviet Union could not support.

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<sup>82</sup> Gorshkov, 15.

<sup>83</sup> Gorshkov, 147.

Supremacy in the Mediterranean would also enable the free flow of Soviet ships through the Dardanelles, which if controlled by the United States, could be blockaded or mined preventing the outflow of Soviet ships from the Black Sea.

Finally, the Caribbean not only provided strategic placement near Cuba and the Panama Canal, but it also situated the fleet within relative striking distance of the United States, which was especially of concern during the Cuban Missile Crisis. In sum, Gorshkov achieved the monumental task he set out to accomplish: to build a world class navy rivaling the United States' and challenging its dominance at sea. He developed a navy and capabilities to counter and exploit the weaknesses he perceived to be present in the U.S. Navy, most specifically its carrier fleet, and distributed his fleet to impose a constant threat, in peacetime and in war.

### **C. CONCLUSION**

Gorshkov is an overlooked naval strategist whose tactics and strategy are highly profitable for this age. Although he failed at evangelizing the world with Communism, he succeeded in building and employing a naval force that challenged United States' dominance at sea for thirty years. Though the United States remains a nuclear power and has retained supremacy at sea, it is presently being challenged by Russia and China, whose current intentions, strategy, and tactics highly resemble those employed in Gorshkov's day. The next chapter will assess the Russian Federation's 2017 naval policy.

### III. THE RUSSIAN FEDERATION'S NAVAL POLICY

In 2017, President Putin signed and released, *Fundamentals of the State Policy of the Russian Federation in the Field of Naval Operations for the Period Until 2030*. This policy document provides direction for the development of a balanced blue-water and green-water fleet, including new nuclear and non-nuclear weapons and capabilities, and firmly states Russia's principal naval objective: to become the world's second greatest navy.<sup>84</sup> This thesis chapter examines the Russian Federation's naval policy, its new and advanced weapons, and details various observations and evaluations.

#### A. PUTIN'S NAVAL POLICY: WHAT DOES IT SAY?

The *Fundamentals of the State Policy of the Russian Federation in the Field of Naval Operations for the Period Until 2030* is a document addressing general provisions, threats, goals, the utility of the navy, requirements of the navy, and implementation. The first section, on general provisions, outlines the legality of the naval policy. In short, it states that the president of Russia is the authority who outlines the strategic objectives of the policy, and that international law and norms, international treaties, and the Constitution of the Russian Federation, as its foundation. This is particularly pertinent to other nations because, actions in Crimea and Georgia demonstrate that the Russian Federation has sought to justify its actions based on legality, specifically under its constitution and the protection it offers Russian citizens. This will be discussed further in the section on legal language and "Russian 'Deniable' Intervention in Ukraine: How and Why Russia Broke the Rules," by Roy Allison.<sup>85</sup>

The second section details threats to Russia and its allies. Such threats include the United States, NATO, the EU, threats to freedom of navigation on the world's oceans, increasing competition for natural resources, the proliferation of weapons of mass destruction, the development of advanced missile technologies, domestic and transnational

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<sup>84</sup> Russian Federation, *Fundamentals of the State Policy of the Russian Federation*, 13.

<sup>85</sup> Roy Allison, "Russian 'Deniable' Intervention in Ukraine: How and Why Russia Broke the Rules," *International Affairs*, vol. 90, Issue 6 (November, 2014), <https://doi.org/10.1111/1468-2346.12170>.



terrorism, piracy, etc. The impact of these threats varies and ranges from issues affecting national security to negative effects on the economy and the environment. The reach of these threats is global and therefore necessitates the development of a global navy. Although these threats are not unique to Russia and are experienced by other nations, the Russian Federation is insistent on creating and espousing a threat narrative centered on the United States, NATO, the EU, and Western expansionism. This claim is fallacious. Georgia and Ukraine seek NATO and EU membership of their own accord, not because of coercion or to fulfill purposes of western expansion.<sup>86</sup>

The third section on goals is the most substantial and stretches across a broad scope of spheres. It articulates the actions necessary for Russia to build the world's second greatest navy. In short, the Russian Federation must provide the infrastructure, facilities, technology, and education required to build advanced technologies, innovations, and ships essential to a modern navy. This navy must be able to deploy globally; it must be sustainable, environmentally conscientious, and able to hit shore targets with conventional and strategic and nonstrategic nuclear weapons. It is notable that this policy lists many objectives for the various spheres but does not provide any guidance for their accomplishment. I agree with Andrew Monaghan, that this lack of guidance is one of the issues burdening the Russian Federation and its implementation of policies.<sup>87</sup>

The fourth section details the role of the navy in strategic deterrence and is notable because it credits the United States' prompt "global strike" initiative as the catalyst for Russian Federation strategic deterrence capabilities.<sup>88</sup> The policy states that the Russian Federation, to provide strategic deterrence, must have a global and sustainable navy, capable of delivering sea-based "strategic nuclear forces and conventional naval forces."<sup>89</sup> Moreover, it must be able to destroy an "enemy's military and economic potential by

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<sup>86</sup> Stefan Meister, "Five Misconceptions about the Putin System," (working paper, Federal Academy for Security Policy, 2015), 1, [https://www.baks.bund.de/sites/baks010/files/misconceptions\\_on\\_russia\\_2015.pdf.pdf](https://www.baks.bund.de/sites/baks010/files/misconceptions_on_russia_2015.pdf.pdf).

<sup>87</sup> Andrew Monaghan, "Putin's Russia: Shaping a 'Grand Strategy,'" *International Affairs*, vol. 89, Issue 5 (September 2013): 1229, <https://doi.org/10.1111/1468-2346.12068>.

<sup>88</sup> Russian Federation, *Fundamentals of the State Policy of the Russian Federation*, 11.

<sup>89</sup> Russian Federation, 11–13.

striking vital facilities from the sea,” and possess an ample amount of precision weapons to do so.<sup>90</sup> It must cooperate with Russia’s allies, enhance its fleet capabilities, frequently deploy under the ice layer in the Arctic, and maintain a permanent presence in the Mediterranean and in “other strategically important areas of the World Ocean, including in the areas of vital sea lines of communication.”<sup>91</sup>

This is significant for four reasons. First, it specifies and emphasizes that the United States and its strategic capabilities are a national security threat to the Russian Federation. Prompt Global Strike (PGS) will allow the United States to strike anywhere on earth through the deployment of conventionally armed ballistic missiles. If Russia did not possess a significant defense against ballistic missiles, the United States could easily target, with great success, any shore-based strategic installation in Russia. Second, this policy exhibits Russia’s intent to produce medium and long-range weapons to target land installations from the sea. With the Intermediate-Range Nuclear Force (INF) Treaty no longer in effect, this could become particularly problematic along the East and West coasts of the United States, since each coast is home to many government facilities, military bases, energy facilities, and the fishing and shipping industries. Russia could easily threaten the United States and Europe with conventional or tactical nuclear weapons without “violating the [ir] sovereignty.”<sup>92</sup> Third, a permanent Russian naval presence in the Mediterranean would present a visible challenge to the permanent presence of the U.S. Navy, and better facilitate the targeting of EU and NATO headquarters buildings by Russia from the sea. Fourth, maintaining a presence under the ice in the Arctic, as well as in the sea lanes, implies Russia’s intent to deploy its nuclear submarines and Northern Fleet. The United States cannot currently or in the foreseeable future match the number of icebreakers possessed by Russia, and an affordable U.S. strategy in the Arctic will require attention by

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<sup>90</sup> Russian Federation, 11–12.

<sup>91</sup> Russian Federation, 12.

<sup>92</sup> Russian Federation, 12.

the United States Department of Defense.<sup>93</sup> Russia’s nuclear ice-breakers ensure the mobility of the Northern Fleet, while Arctic-based nuclear submarines present an SLBM threat to the United States. Since the U.S. Navy is challenged by the Arctic environment, Russia may more easily exercise sea control there, while also monitoring the flow of shipping and controlling access to natural resources.

The fifth section provides a list of imperatives for the Russian Navy in peace and war and reaffirms the goals of previous sections. It is notable that the specific mention of hypersonic missile capabilities, the necessity to be able to deliver devastating force “to compel the enemy to cease military operations,” and the fielding of unmanned autonomous underwater vehicles are expected by 2025.<sup>94</sup> Recently published articles by Mark Episkopos and by Michael Kofman highlight the capabilities of the Tsirkon, the Kalibr, the Burevestnik, and the Poseidon.<sup>95</sup> This is significant because Kalibr and Tsirkon can be launched from a combination of platforms and each can be outfitted with a nuclear or conventional warhead. This exhibits the Russian Federation’s desire to produce modular weapons with cross platform compatibility. Each missile differs in its flight characteristics and means of propulsion. In sum, the Tsirkon is a hypersonic missile being developed to enable launch from surface and ground platforms and is able to destroy naval and land-

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<sup>93</sup> John H. Pendleton, *Arctic Planning: Navy Report to Congress Aligns with Current Assessments of Arctic Threat Levels and Capabilities Required to Execute DoD’s Strategy*, GAO-19-42 (Washington, DC: Government Accountability Office, 2018), <https://www.gao.gov/assets/700/695312.pdf>; Charlie Gao, “The ‘Icebreaker Gap’: How Russia is Planning to Build More Icebreakers to Project Power in the Arctic,” *National Interest* (blog), August 19, 2018, <https://nationalinterest.org/blog/buzz/icebreaker-gap-how-russia-planning-build-more-icebreakers-project-power-arctic-29102/>; <sup>93</sup> Marie A. Mak, *Polar Ice Breaker Program Needs to Address Risks Before Committing Resources*, GAO-18-600 (Washington, DC: Government Accountability Office, 2019), <https://www.gao.gov/assets/700/694249.pdf>.

<sup>94</sup> Russian Federation, *Fundamentals of the State Policy of the Russian Federation*, 13–14.

<sup>95</sup> Michael Kofman, “Emerging Russian Weapons: Welcome to the 2020s (Part 1- Kinzhal, Sarmat, 4202),” *Russian Military Analysis* (blog), March 4, 2018, <https://russianmilitaryanalysis.wordpress.com/2018/03/04/emerging-russian-weapons-welcome-to-the-2020s-part-1-kinzhal-sarmat-4202/>; Michael Kofman, “Emerging Russian Weapons: Welcome to the 2020s (Part 2- 9M730?, Status-6, Klavesin-2R),” *Russian Military Analysis* (blog), March 6, 2018, <https://russianmilitaryanalysis.wordpress.com/2018/03/06/emerging-russian-weapons-welcome-to-the-2020s-part-2-9m730-status-6-klavesin-2r/>; Mark Episkopos, “Russia Has Tested Its Tsirkon Hypersonic Missile ‘Over Ten Test Launches,’” *National Interest* (blog), December 23, 2018, <https://nationalinterest.org/blog/buzz/russia-has-tested-its-tsirkon-hypersonic-missile-over-ten-test-launches-39637/>; Mark Episkopos, “Russia’s Dangerous ‘Kalibr’ Cruise Missile Could See Range Doubled: Report” *National Interest* (blog), January 12, 2019, <https://nationalinterest.org/blog/buzz/russias-dangerous-”kalibr”-cruise-missile-could-see-range-doubled-report-41427/>;

based targets.<sup>96</sup> The Kalibr cruise missile is not a hypersonic missile, but is capable of extended range, carrying various warheads; and, it can be launched from surface and platforms.<sup>97</sup> The Burevestnik is a nuclear-powered cruise missile said to possess similar capabilities to those of the United States' Tomahawk Land Attack Missile (TLAM).<sup>98</sup> Where the Burevestnik differs from the TLAM, the Tsirkon, and Kalibr, is that it is nuclear-powered, which enables it to remain aloft indefinitely and fly for an unlimited distance. Burevestnik is currently only able to be launched from land. The Poseidon, however, is not a missile, but an unmanned underwater drone capable of delivering a nuclear warhead.<sup>99</sup> It is said to be able to travel up to 185km/h to a distance of up to 10,000 km.<sup>100</sup> The purpose in briefly mentioning each of these missiles is to illustrate Russia's ability to deliver devastating force and to exemplify the impressive ability of the Russian Federation to use them interchangeably across multiple platforms without the need for new vertical launch systems (VLS) or heavy modifications to accommodate them. These weapons are discussed further in the following section.

In short, the Russian Federation's naval policy offers a comprehensive list of objectives which may be summarized as follows. Russia's naval policy is to become the world's second greatest navy through the creation of a balanced naval force, comprised of modern blue-water and green-water ships and submarines, conventional and non-conventional, interconnected through advanced weapons and communications systems, employing a range of cutting-edge missiles, technologies, and underwater capabilities to ensure strategic defense, deterrence and a decisive combat ability. This naval policy emphasizes the necessity of individual troop training, exercises at sea, increased international cooperation, a global presence, the creation of facilities, and an auxiliary component to sustain its forces at sea.

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<sup>96</sup>Episkopos, "Russia Has Tested Its Tsirkon Hypersonic Missile 'Over Ten Test Launches.'"

<sup>97</sup> Episkopos, "Russia's Dangerous 'Kalibr' Cruise Missile Could See Range Doubled: Report."

<sup>98</sup> Kofman, "Emerging Russian Weapons: Welcome to the 2020s (Part 2- 9M730?, Status-6, Klavesin-2R)."

<sup>99</sup> Kofman.

<sup>100</sup> Kofman.

## B. OBSERVATIONS

On 2 March 2019, General of the Army Valery Gerasimov, Chief of the Russian Federation Armed Forces General Staff, delivered a speech to the Academy of Military Sciences General Assembly on strategy. The speech itself did not examine or update Russia's naval policy, but it did highlight the continuity between what may be considered Russia's grand strategy and the objectives of its naval policy. That is, Russia will continue to pursue advanced weapons, such as the Avangard, Sarmat, Peresvet, Kinzhal, Poseidon, Burevestnik, Tsirkon and the nuclear triad, to ensure it is capable of deterring threats and “wag [ing] wars against a ‘high-tech enemy’ using precision-guided munitions from the air, sea, and space.”<sup>101</sup>

What is noteworthy is the terminology used to describe the “high-tech enemy.”<sup>102</sup> As highlighted by Russia's naval policy, the United States is the “adversary possessing high-tech naval capabilities” and threatens Russia with its “‘global strike’ concept.”<sup>103</sup> The Conventional Prompt Global Strike (CPGS) program (also known as Prompt Global Strike (PGS)) was created in 2003 and has evolved under the presidencies of George W. Bush, Barack H. Obama and Donald J. Trump. PGS was created to equip the United States with the ability to strike anywhere globally within thirty minutes to an hour of launch.<sup>104</sup> On 8 January 2019, the Congressional Research Service released an updated report, *Conventional Prompt Global Strike and Long-Range Ballistic Missiles: Background and Issues*, which assesses the need for prompt global strike and ballistic missile capabilities and highlights the funding increase “from around \$201 million in FY2018 to \$278 million in FY2019; it also shows significant increases in funding over the next five years, with a

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<sup>101</sup> Krasnaya Zvezda, “Vectors of Military Strategy Development,” Red Star, accessed March 30, 2019. [https://www.opensource.gov/portal/server.pt/gateway/PTARGS\\_0\\_0\\_200...0\\_43/content/Display/POW/CEW2019030445228688?printerFriendly=true](https://www.opensource.gov/portal/server.pt/gateway/PTARGS_0_0_200...0_43/content/Display/POW/CEW2019030445228688?printerFriendly=true).

<sup>102</sup> Zvezda, “Vectors of Military Strategy Development.”

<sup>103</sup> Russian Federation, *Fundamentals of the State Policy of the Russian Federation*, 11; Zvezda, “Vectors of Military Strategy Development.”

<sup>104</sup> Amy F. Woolf, *Conventional Prompt Global Strike and Long-Range Ballistic Missiles: Background and Issues*, CRS Report No. R41464 (Washington, DC: Congressional Research Service, 2019), 2, <https://fas.org/sgp/crs/nuke/R41464.pdf>.

total of \$1.9 billion allocated to the program.”<sup>105</sup> This is also significant because Gerasimov states that the Russian Federation currently possesses the ability to defend against a Prompt Global Strike. A final interesting observation is Gerasimov’s point that “digital technologies, robotics, unmanned systems, and REB (electronic warfare), all this must be on the agenda for the development of military science, including military strategy.”<sup>106</sup> The purposes of these systems are multi-faceted and complementary. Each of these areas encompasses or builds on the strengths of the other to more effectively deliver capabilities or benefits such as the increase of electronic sensor range, detection and jamming, and the remote delivery of nuclear weapons for purposes of deterrence and defense. Elements of each have been emphasized in the naval policy. Additionally, these points illustrate that Russian military strategy has not significantly progressed since the naval policy was released in 2017. Interestingly, the same is not true of the United States’ naval strategy, which in 2015 and 2016 did not greatly emphasize Russia as a major threat, unlike its most recent revision released on 17 December 2018.<sup>107</sup>

The Russian naval policy is replete with legal language. In 2014, the Russian Federation invaded Ukraine and annexed Crimea. In his article “Russian ‘Deniable’ Intervention in Ukraine: How and Why Russia Broke the Rules,” Roy Allison argues that “Russia presented an assortment of legal and normative arguments to justify its coercive acts in Crimea.”<sup>108</sup> He argues that Putin not only utilized legal rhetoric to try to justify Russia’s actions in Ukraine, but also pursued these actions to challenge and change accepted international laws and norms.<sup>109</sup> Furthermore, Putin utilized the Russian

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<sup>105</sup> Woolf, *Conventional Prompt Global Strike and Long-Range Ballistic Missiles: Background and Issues*, Summary.

<sup>106</sup> Zvezda, “Vectors of Military Strategy Development.”

<sup>107</sup> Department of Defense, *A Cooperative Strategy for 21<sup>st</sup> Century Seapower* (Washington, DC: United States Marine Corps, United States Department of the Navy, United States Coast Guard, 2015), <https://www.navy.mil/local/maritime/150227-CS21R-Final.pdf>; John M. Richardson, *A Design for Maintaining Maritime Superiority, Version 1.0*, Washington, DC: United States Navy, 2016, [http://edocs.nps.edu/2016/January/CNO\\_STG.pdf](http://edocs.nps.edu/2016/January/CNO_STG.pdf); Richardson, *A Design for Maintaining Maritime Superiority, Version 2.0*.

<sup>108</sup> Allison, “Russian ‘Deniable’ Intervention in Ukraine: How and Why Russia Broke the Rules,” 1260.

<sup>109</sup> Allison, 1267.

Federation's constitutional commitment to justify its incursion into Crimea. This is exceptional because, as Allison illustrates, Putin operated under the guise of protecting Russian citizens (who are to be protected under the Russian Federation's constitution) and had been invited into Ukraine by the former Ukrainian President, Viktor Yanukovich, to provide assistance. The Russian Federation, under its constitution, legally recognized Yanukovich's presidency but not the legitimacy of the interim government under President Petro Poroshenko.

Furthermore, invading under legal pretenses allowed Putin to achieve strategic goals within the naval sphere. Allison notes that the annexation accomplished three things. First, it returned the major naval base of Sevastopol to Russia, ending the necessity of continuous contract negotiations for a Russian naval presence. Previous agreements "prevented any expansion of the Black Sea Fleet," and prevented Russia from "add [ing] new types of ships or naval aviation."<sup>110</sup> Second, during the annexation, Russia seized twenty-five Ukrainian warships. This action increased the Russian Navy's ship numbers and solidified its naval ranking over Turkey in the Black Sea. Third, the annexation would "invigorate ambitious plans for military development on and strategic reach from the Crimean Peninsula," which, coincidentally, is a goal under Putin's naval policy.<sup>111</sup> It should be noted how the events in Crimea are fulfilling one of the objectives of Putin's policy that was released in 2017, three years after the annexation.

In sum, the legal language within the Russian Federation's naval policy may be utilized to accomplish three objectives. First, Putin may use the rhetoric of internationally accepted laws and norms to justify Russian Federation plans and actions under his naval policy, including the use of force as a retaliatory response. Second, the release of this document to the public pushes the narrative that Russia's naval policy is legally acceptable, and that violence is justified when others, such as the United States, violate internationally accepted laws, norms, or rights protected under the Constitution of the Russian Federation.

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<sup>110</sup> Allison, 1278.

<sup>111</sup> Allison, 1278; Russian Federation, *Fundamentals of the State Policy of the Russian Federation*, 12.

This empowers Russia to interpret who violates what laws and when, thus enabling Russia to portray itself as taking the legal high road when it acts or responds with force.<sup>112</sup> Third, should there be another invasion, Putin will likely utilize legal rhetoric to justify it.

### C. EVALUATION

In 2013, Andrew Monaghan published an article titled, “Putin’s Russia: Shaping a ‘Grand Strategy’?,” which is a study of the Russian Federation’s implementation of policies and plans beginning in the late 1990s through the present. Its lessons are applicable to naval policy for three reasons. First, Monaghan found that Russia creates policies which contain “inconsistencies, contradictions, and gaps that emerge between various concepts, strategies, doctrines and presidential instructions.”<sup>113</sup> He emphasizes that in some cases these gaps have resulted in a “lack of clear and consistent guidelines for military reform” and have only highlighted other departmental issues.<sup>114</sup> The result, he says, is that “the plans themselves do not provide a clear framework for action; the gap between ‘political flexibility’ and ‘clarity for implementations’ is not uniformly bridged.”<sup>115</sup> This has resulted in the poor implementation of plans, doctrines, and strategies. Second, he says that Russia has an issue with capacity.<sup>116</sup> This means that at a bureaucratic level, Russia struggles with cross-departmental cooperation, infighting and rivalry, and this prevents the sharing of necessary information and ultimately degrades the Russian Federation’s ability to pass legislation. One example he cites is a recent failure to pass legislation on strategic planning which has been “under consideration since 2006.”<sup>117</sup> Third, Monaghan says that Russia faces an issue with its leadership and says that it is most “clearly illustrated by the failure of the ‘vertical of power’, the hierarchy established by Putin to facilitate a vertical chain of authority, with a strong government at the top and discipline and responsibility

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<sup>112</sup> Russian Federation, *Fundamentals of the State Policy of the Russian Federation*, 2–13.

<sup>113</sup> Monaghan, “Putin’s Russia: Shaping a ‘Grand Strategy,’” 1231–32.

<sup>114</sup> Monaghan, 1231–32.

<sup>115</sup> Monaghan, 1231–32.

<sup>116</sup> Monaghan, 1232–33.

<sup>117</sup> Monaghan, 1232–33.



below in implementing tasks.”<sup>118</sup> This failure of leadership has resulted in a “high percentage of presidential instructions remain [ing] unfulfilled.”<sup>119</sup> Therefore, Putin and other leaders are now “obliged to resort to ‘manual control’ methods to ensure instructions are carried out.”<sup>120</sup> In sum, Putin currently has significant problems associated with drafting consistent policies, plans and doctrines, and their implementation. Lack of implementation has necessitated micromanagement from leaders to accomplish day to day tasks, and this distracts them from the more critical items. Therefore, the Russian Federation may experience difficulty implementing its very ambitious naval policy.

#### **D. CONSTRAINTS**

In, “Russia’s New and Unrealistic Naval Doctrine,” Dmitry Gorenburg examines Russia’s naval policy and provides three points and a pessimistic (from the Russian point of view) conclusion. First, Russia’s policy is “another salvo in the ongoing rearguard action by the Russian Navy to protect its procurement budget.”<sup>121</sup> He notes the convenient timing of the policy’s release before the finalization of the latest State Armament Program (SAP). In short, the naval policy is a strategic gesture to maintain or increase funding levels. Second, he says that it is noteworthy that the doctrine plans to 2025, and largely consists of ideas to supplement the Russian Federation’s conventional force with hypersonic missiles and underwater weapons. He says these aims are unrealistic because Russia struggles with slow ship production, has not produced a ship larger than a frigate within the past ten years, and plans for next generation non-nuclear submarines have stagnated due to Russia’s inability to create the necessary air-independent propulsion (AIP) system. In sum, Russia has high hopes to attain new strategic and non-strategic weapons, nuclear and conventional forces, but this ambitious plan will not be realized because of its own production problems. Third, he concludes that Russia’s naval policy is another document

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<sup>118</sup> Monaghan, 1232–33.

<sup>119</sup> Monaghan, 1233–34.

<sup>120</sup> Monaghan, 1234–35.

<sup>121</sup> Dmitry Gorenburg, “Russia’s New and Unrealistic Naval Doctrine,” War on the Rocks, last modified July 26, 2017, <https://warontherocks.com/2017/07/russias-new-and-unrealistic-naval-doctrine/>.

that will sit on the “Russian Defense Ministry’s already rather full shelf of unfulfilled aspirational documents.”<sup>122</sup> In sum, Gorenburg concludes that Russia has a very low likelihood of becoming the world’s second greatest navy before 2030.<sup>123</sup>

In *Not Just Money: Constraints Facing the Russian Armed Forces*, Alexei Nikolsky surveys the potential impacts of the SAP-2020 budget on SAP-2027. As it pertains to the Russian Federation Navy, he made three observations. First, the navy received the second largest sum of budgetary spending in SAP-2020. Of these funds two-thirds or approximately 3.6 trillion rubles, was specifically allocated to fund navy weapons and ships.<sup>124</sup> Second, Nikolsky found that of the plans to build twenty-four submarines and fifty-four surface ships only twelve submarines and five frigates and eleven corvettes were delivered in 2018, illustrating that shipbuilding is severely behind schedule.<sup>125</sup> Finally, he concluded that the reason why shipbuilding is lagging is the severe impact of “unrealistic deadlines” and the “impact of the sanctions imposed on Russia in 2014.”<sup>126</sup> However, despite this shortfall, Russia has been successful in the development of its nuclear triad capabilities and has likely accounted for the impact of current sanctions in the new SAP-2027.<sup>127</sup>

In *The Russian Navy in the 21st Century: The Legacy and the New Path*, Konstantin Bogdanov and Ilya Kramnik analyze the past thirty years of naval modernization. While their study provides a list of ten conclusions, this paper will briefly mention seven. First, the Russian Navy currently resembles the Soviet Navy of twenty-five to thirty years ago. Many of the systems, capabilities, and structure have been greatly impacted by economic and financial restraints, and as a result, it has been unable to adapt. It is currently in a phase

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<sup>122</sup> Gorenburg, “Russia’s New and Unrealistic Naval Doctrine.”

<sup>123</sup> Gorenburg.

<sup>124</sup> Alexei Nikolsky, *Not Just Money: Constraints Facing the Russian Armed Forces*, CNA (Arlington, VA: CNA 2018), [https://www.cna.org/CNA\\_files/PDF/DOP-2018-U-018170-Final.pdf](https://www.cna.org/CNA_files/PDF/DOP-2018-U-018170-Final.pdf) .

<sup>125</sup> Nikolsky, *Not Just Money: Constraints Facing the Russian Armed Forces*, 13.

<sup>126</sup> Nikolsky, 13.

<sup>127</sup> Nikolsky, 22.

of “catch-up.”<sup>128</sup> Second, the SAP-2020 has been successful in funding and the production of aviation and nuclear triad assets, but less successful in shipbuilding. If shipbuilding problems persist, the navy will become the sole problem of the next decade and a major drain on state resources. Third, the Russian Federation lacks consistency in shipbuilding due to the overwhelming number of ship platforms. These issues will result in high costs and further delays. Fourth, “naval construction in the 2000s suffered from underfunding.”<sup>129</sup> As a result of the SAP-2020, severe imbalances were created within the naval force construct, resulting in a need for the immediate bolstering of “auxiliary and antimine defense forces,” and “massive investments in naval base infrastructure and ship repair” facilities.<sup>130</sup> Fifth, because Russia was unable to produce many fourth-generation ships between 2001–2020, the emphasis on obtaining carrier battle groups has been deprioritized and delayed until the end of SAP-2027. Sixth, green-water ships and nuclear and non-nuclear missiles are the immediate priority. Seventh, the current economic situation “favors the development of fifth-generation submarine forces.”<sup>131</sup> In sum, the Russian Federation made significant attempts to pour a massive sum of money into the defense industrial complex with SAP-2020 to make up for years of neglect; however, despite this initial attempt, many critical problems exist which may impact its naval strategy.

In March 2018, Michael Kofman released two articles, “Emerging Russian Weapons: Welcome to the 2020s” (Parts 1 and 2), in which he discussed the development of the Kinzhal, Sarmat, Vangard, Burevestnik, Status-6, and the Klavesin-2R, as mentioned by President Putin during his State of the Nation Address on 1 March 2018. It must be noted that Kofman did not discuss the Tsirkon in his articles, because the Tsirkon was referenced in Putin’s Presidential Address to the Federal Assembly on 20 February

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<sup>128</sup> Konstantin Bogdanov and Ilya Kramnik, *The Russian Navy in the 21<sup>st</sup> Century: The Legacy and the New Path*, CNA (Arlington, VA: CNA 2018), [https://www.cna.org/CNA\\_files/PDF/IOP-2018-U-018268-Final.pdf](https://www.cna.org/CNA_files/PDF/IOP-2018-U-018268-Final.pdf), 38.

<sup>129</sup> Bogdanov and Kramnik, *The Russian Navy in the 21<sup>st</sup> Century: The Legacy and the New Path*, 38–39.

<sup>130</sup> Bogdanov and Kramnik, 39.

<sup>131</sup> Bogdanov and Kramnik, 39.

2019.<sup>132</sup> For the purposes of this paper, only the Tsirkon, Kalibr-M, Burevestnik, and Status-6 (Poseidon) are discussed in some detail, because of their ties to the navy.

The Tsirkon may represent a significant threat to the United States' naval forces which currently do not possess the defense capabilities to defeat it; however, they may not need to do so. Tsirkon's accuracy is currently unknown, and there are questions surrounding its guidance system. It is suggested that it likely "uses radar homing," which could be problematic for the weapon if ships are not emitting.<sup>133</sup> Furthermore, if Tsirkon utilizes a satellite-based guidance system, it may struggle at hypersonic speeds due to loss of connectivity with satellites.<sup>134</sup> However, if equipped with a tactical nuclear warhead, precision will not be much of a factor as long as the weapon can arrive within the vicinity of its intended target(s) and deliver devastating effects. Finally, due to the known unreliable history of scramjet and ramjet type engines and the extreme temperatures faced by rockets traveling at hypersonic speeds, it is possible the rocket could be unreliable.<sup>135</sup> Scramjets have been known to flame-out due to disruptions in airflow to the scramjet, which results in a loss of propulsion in flight. Multiple or intensive maneuvering in flight could create a situation in which the disruption of airflow to the rocket's scramjet is likely. Therefore, ships maneuvering during the rocket's terminal phase may be problematic for the rocket and its effectiveness.

The Kalibr-M is a likely threat for the United States and its navy. It is capable of being fired from most large surface and sub-surface platforms. As a cruise missile, it is intended to compete against the TLAM-E Block IV and boasts a range and speeds in excess of two times those of the U.S. Navy's TLAM.<sup>136</sup> The cruise missile is generally a land-

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<sup>132</sup> President Vladimir Putin, "Presidential Address to Federal Assembly," Kremlin, last modified February 20, 2019, <http://en.kremlin.ru/events/president/news/59863>.

<sup>133</sup> Charlie Gao, "Russia's Zircon Hypersonic Missile: Now in Land-Attack Mode?," *National Interest* (blog), last modified March 9, 2019, <https://nationalinterest.org/blog/buzz/russias-zircon-hypersonic-missile-now-land-attack-mode-46597>.

<sup>134</sup> Gao, "Russia's Zircon Hypersonic Missile: Now in Land-Attack Mode?"

<sup>135</sup> Michael Belfiore, "The Hypersonic Age is Near," *Popular Science*, last modified December 9, 2007, <https://www.popsci.com/military-aviation-space/article/2007-12/hypersonic-age-near>.

<sup>136</sup> Episkopos, "Russia's Dangerous 'Kalibr' Cruise Missile Could See Range Doubled: Report."

attack missile; however, if it does possess similar capabilities to those of the TLAM, there is reason to believe that it could be utilized as an anti-ship cruise missile. The Kalibr-M is in its development stage.<sup>137</sup>

As previously mentioned, the Burevestnik is the nuclear-powered equivalent of the Tomahawk. Kofman notes that there have been several successful tests of this cruise missile; however, none of the test flights has been conducted with its intended form of propulsion, which is, a small nuclear reactor. He notes that analysts believe the rocket is too small to possess a shielded reactor; therefore, Burevestnik will disperse nuclear particulate in flight. He thinks that this project is likely the farthest along in production.

The Status-6 (Poseidon), Kofman says, is suggested to “reach a depth of 1000 meters, speed up to 185 km per hour, range up to 10,000 km, and is 1.6m in diameter.”<sup>138</sup> He observes that the publicized capabilities of the Poseidon are exaggerated and problematic. He says that traveling at 185km/h, this weapon would be extremely loud and easily detectable underwater. Moreover, its payload would be excessive, and it would be difficult to direct after launch, especially at a moving Carrier Strike Group. According to Jane’s, early reports on the Poseidon significantly inflated the size of the weapon’s warhead stating that it was one hundred megatons; however, this figure has since been revised to two megatons.<sup>139</sup> Like the Burevestnik, the Poseidon possesses a nuclear propulsion plant which has not yet been tested. Additionally, he says, the Poseidon is a “third strike countervalue weapon,” intended for “taking out U.S. coastal cities, and irradiating an entire area.”<sup>140</sup>

In sum, Russia intends to produce advanced weapons which will challenge the existing capabilities of the United States. Kofman believes that Putin exaggerated the

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<sup>137</sup> Episkopos.

<sup>138</sup> Kofman, “Emerging Russian Weapons: Welcome to the 2020s (Part 2- 9M730?, Status-6, Klavesin-2R).”

<sup>139</sup> “Russian Submarine and Nuclear Torpedo Prepare to Launch,” Jane’s by IHS Markit, 25 March, 2019, <http://www.janes.com/article/87427/russian-submarine-and-nuclear-torpedo-prepare-to-launch>.

<sup>140</sup> Kofman, “Emerging Russian Weapons: Welcome to the 2020s (Part 2- 9M730?, Status-6, Klavesin-2R).”

capabilities of these systems and their fielding, but he believes they will “arrive sometime in the 2020s.”<sup>141</sup> As Kofman has noted, it is not unrealistic to expect further setbacks due to quality or parts availability, but the issue should not be funding since it is provided for under SAP-2027.<sup>142</sup> On the necessity of the weapons mentioned in Putin’s speech, Kofman concludes that “Russia neither needs these weapons to ensure the viability of its deterrent, or that their acquisition fundamentally changes anything in the military balance with the U.S.”<sup>143</sup>

## **E. CONCLUSION**

Putin’s naval policy is highly ambitious, requires a great sum of capital and infrastructure, and suffers from severe economic and technical constraints. Some of these economic constraints, such as sanctions, have further implications relating back to the 2014 invasion of Ukraine. Limited production of blue-water assets has implications for the type of fleet that can be constructed, what it is capable of, and how it can be used. Many of these issues have been seen before in Russia’s history, notably under Stalin and under Gorshkov. The next chapter will identify implications for future U.S. naval strategy.

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<sup>141</sup> Kofman.

<sup>142</sup> Julian Cooper, *The Russian State Armament Programme, 2018 – 2027*, NATO Defense College (Rome, Italy: Russian Studies, 2018), 15, <http://www.ndc.nato.int/news/news.php?icode=1167#>.

<sup>143</sup> Kofman, “Emerging Russian Weapons: Welcome to the 2020s (Part 2- 9M730?, Status-6, Klavesin-2R).”

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## IV. CONCLUSIONS: RUSSIAN NAVAL POLICY, U.S. NAVAL STRATEGY AND IMPLICATIONS FOR FUTURE NAVAL STRATEGY

This paper has outlined a shift in Soviet naval policy and the shift from a “new-school” green-water strategy to an “old-school” blue-water strategy. This paper contrasted Soviet policy with the Russian Federation’s current naval policy, since the end of the Soviet Union, and Russia’s naval defense spending since 2012. The focus of this chapter is to provide conclusions for future U. S. naval strategy.

### A. OBSERVATIONS—U.S. NAVAL STRATEGY

The United States’ naval strategy, presented in *A Design for Maintaining Maritime Superiority, Version 2.0*, is a blue-water strategy.<sup>144</sup> It differs from previous strategies in that it provides more emphasis on distributed maritime operations (DMO), the implementation of the decentralization of command, communications and sensors, and puts less emphasis on deploying as carrier strike groups. *A Design for Maintaining Maritime Superiority, Version 2.0*, emphasizes maritime superiority, providing secure seas, projecting power ashore, and sustaining naval presence. Like the Russian Federation’s policy, it advances the development of hypersonic weapons, unmanned vehicles, lasers, and shipbuilding. Unlike previous U.S. policy documents, it reestablishes Russia as a threat, whereas in previous policies the significance of Russia as a threat has been marginalized.<sup>145</sup> This is likely because Russia’s navy has not posed a threat to U.S. naval superiority since the fall of the Soviet Union. The United States may have understated the Russian navy, the role it intends to play within the naval sphere of operations and its aspirations. The United States’ latest policy does acknowledge Russia as a growing threat and the necessity of the United States to rapidly adapt. *A Design for Maintaining Maritime Superiority, Version 2.0*, does not depart from a blue-water strategy.

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<sup>144</sup> Richardson, *A Design for Maintaining Maritime Superiority, Version 2.0*.

<sup>145</sup> Richardson, *A Design for Maintaining Maritime Superiority, Version 1.0*, 11–18; Department of Defense, *A Cooperative Strategy for 21<sup>st</sup> Century Seapower*.



## B. CONCLUSIONS ON RUSSIAN NAVAL POLICY

This study offers seven conclusions regarding contemporary Russian naval policy: (1) Russia will be unable to fully implement its naval policy; (2) economic stagnation will limit the production of a blue-water fleet; (3) the invasion into Ukraine and the annexation of Crimea will continue to be problematic for the Russian Navy; (4) the Russian Federation will rely on submarines and advanced missile capabilities; (5) the Russian fleet will be unbalanced; (6) Russia will continue to leverage legal justification for its aggressive actions and expansionism; (7) Russia's use of media for internal and external signaling, and to produce national support for the Russian Federation and its navy, is not unique, alarming or unlike the use of media by other nations.

First, Russia will not produce a great blue-water fleet because of its inability to consistently implement policy. In his study on the implementation of Russian policy, Andrew Monaghan concluded that Russia has struggled since the late 1990s to successfully implement policy.<sup>146</sup> He concluded that many of Russia's policies were vague and lacked detailed instruction. He also found that Russia cannot adequately implement policy due to bureaucratic infighting and weak leadership. This point is supported by Mathieu Boulegue in his research paper, *Russia's Military Posture in the Arctic*, written at the Royal Institute of International Affairs. Mathieu asserts that "Russia does not have an Arctic military strategy per se. Official documents detailing Russia's Arctic policy discuss military activities only in broad terms."<sup>147</sup> Therefore, it is acceptable to believe that the implementation of Russia's naval policy as a whole will be met with similar imprecision as a result of ambiguous policies and therefore may only be implemented with limited success.

Second, the current climate of economic stagnation in Russia is not conducive to building an expensive blue-water fleet. It is likely that only a portion of the Russian

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<sup>146</sup> Monaghan, "Putin's Russia: Shaping a 'Grand Strategy,'" 1231–32.

<sup>147</sup> Mathieu Boulegue, *Russia's Military Posture in the Arctic: Managing Hard Power in a 'Low Tension' Environment*, Royal Institute of International Affairs (London: Chatham House, 2019), <https://reader.chathamhouse.org/russia-s-military-posture-arctic-managing-hard-power-low-tension-environment#>.

Federation's naval policy will be implemented, specifically elements of its nuclear triad (its deterrent capability), and smaller, more affordable, naval assets.<sup>148</sup> Smaller assets are cheaper to produce and Russia has the shipbuilding infrastructure to produce them; however, Russia must maintain its triad development for deterrence against the United States, NATO, or other threats to national security. Current economic stagnation will prevent the development of the shipbuilding infrastructure required for production of blue-water assets and will limit Russia to the production of the coastal vessels that it is currently able to produce. Meanwhile, blue-water assets, like the Gorshkov and Lider classes, will continue to experience slow production and further delays.<sup>149</sup> Additionally, Russia will probably be unable to produce aircraft carriers. Lack of a carrier asset will deprive the Russian Federation Navy of the ability to provide carrier-based strikes, an overseas presence, and its options and flexibility to conduct carrier-based operations like those in Syria. Furthermore, damage to the Kuznetsov may preclude its use in the North Fleet and limit the support it provides as an asset within the bastion defense concept.<sup>150</sup> Finally, new weapons, such as those mentioned in Putin's speech on 1 March 2018, will continue to struggle due to high costs, and production may be limited and further delayed.<sup>151</sup>

Third, the invasion of Ukraine and annexation of Crimea in 2014, may continue to plague the Russian Federation Navy. Russia has heavily relied on Ukraine for the supply and repair of its ships' gas turbine engines; many shipbuilding plans have been canceled or delayed, and their hulls have been sold to other countries because turbines were not available. Russia has been developing its own replacement for Ukrainian manufactured

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<sup>148</sup> Nikolsky, *Not Just Money: Constraints Facing the Russian Armed Forces*; Bogdanov and Kramnik, *The Russian Navy in the 21<sup>st</sup> Century: The Legacy and the New Path*; Julian Cooper, *The Russian State Armament Programme, 2018 – 2027*, 8–10.

<sup>149</sup> Boulegue, *Russia's Military Posture in the Arctic: Managing Hard Power in a 'Low Tension' Environment*, 47–52.

<sup>150</sup> Boulegue, 38.

<sup>151</sup> Amanda Macias, "Russia Will Only Make A Few Units of a Hypersonic Weapon Putin Bragged About, U.S. Intelligence Says," CNBC, last modified July 3, 2019, <https://www.cnbc.com/2019/07/01/russia-will-make-few-units-of-hypersonic-weapon-putin-bragged-about.html>.

turbines.<sup>152</sup> These turbines, however, could take years to successfully test and retrofit to existing ships.<sup>153</sup> Therefore, lack of turbines may lead to further delays in ship production and repairs. Economic issues may further exacerbate problems of development and procurement of turbine systems for naval propulsion.

Fourth, Russia will resort to the use of submarines and advanced missiles to offset the blue-water capabilities of the United States. This is analogous to the navies of Gorshkov and Stalin in two ways. First, Stalin adhered to a “new school” naval strategy until the 1930s when he began investing in a blue-water navy.<sup>154</sup> Therefore, the navy inherited by Gorshkov mostly comprised submarines and small craft and its focus was coastal defense, deterrence, and area denial. Second, we can anticipate that Russia will balance against the United States’ conventional capabilities with advanced missiles, like the Soviet Navy did under Gorshkov. However, unlike Gorshkov’s navy, Putin will have fewer blue-water vessels to equip. This line of thinking suggests that a naval platform equipped with carrier killing missiles could deter, or if launched deprive, the United States of its ability to fight. Like China, the Russian Federation believes that destroying a United States carrier could potentially kill the United States’ will to fight a high-end naval conflict.<sup>155</sup> We should expect the Russian Federation to outfit its naval assets with carrier killing missiles and tactical nuclear weapons. Russia’s new missiles boast longer ranges and enable the Russian Federation Navy to target carriers and warships at greater stand-off ranges. The U.S. Navy’s high value surface assets (carriers, amphibious ships, destroyers, and cruisers) will be threatened.

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<sup>152</sup> Andrew Osborn, “Despite Putin’s Swagger, Russia Struggles to Modernize Its Navy,” Reuters, last modified February 21, 2019, <https://www.reuters.com/article/us-russia-military-insight/despite-putins-swagger-russia-struggles-to-modernize-its-navy-idUSKCN1QA0U7>.

<sup>153</sup> Koffman and Polmar, “Toward Smaller Ships and Professional Sailors.”

<sup>154</sup> Robert C. Whitten, “Soviet Sea Power in Retrospect: Admiral of the Fleet of the Soviet Union Sergei G. Gorshkov and the Rise and Fall of the Soviet Navy,” *The Journal of Slavic Military Studies* 11, no. 2 (1998): 51–52, <https://www.tandfonline.com/doi/abs/10.1080/13518049808430340>.

<sup>155</sup> Kyle Mizokami, “Kill the Carriers: How China Plans to Win a Superpower Showdown Against America,” *National Interest* (blog), last modified April 7, 2019, <https://nationalinterest.org/blog/buzz/kill-carriers-how-china-plans-win-superpower-showdown-against-america-51262>.

Fifth, Russia's fleet will be an unbalanced and submarine-centric fleet. The Russian Federation Navy will become what Gorshkov had warned against—that is, being an unbalanced fleet. In the early 1960s, due to the popularity of the “new school” naval strategy, the Soviets utilized a green-water fleet for coastal defense, deterrence and area denial, and most of its military spending went to its land forces. Gorshkov, knew that for the Soviet Union to become a world power it needed a blue-water navy. In production of this fleet, he cautioned against it becoming unbalanced. He had observed that the Germans, after the Battle of Jutland, were too reliant on their submarines.<sup>156</sup> Overconfidence in their submarines' abilities produced an overreliance which led the Germans to neglect sea control assets, such as carriers, cruisers and destroyers. Furthermore, Gorshkov notes that a lack of coordination between German forces led to the destruction and demise of its navy. This, he says, was particularly evident in the unrestricted submarine warfare campaign launched by the Germans in February 1917.<sup>157</sup> Gorshkov was unsuccessful at producing carriers to deliver a naval aviation strike component due to economic constraints and the cost of carriers and their aircraft, but was able to produce other light carriers such as the Moskva-class helicopter carrier to provide that protection and anti-submarine capability. The first Soviet carriers did not enter service until the early 1990s after Gorshkov left office. Additionally, Gorshkov knew the carrier was the lynchpin in the United States' naval strategy.<sup>158</sup> As a result, Gorshkov understood that it was cheaper to produce missiles than to build carriers. For this reason, and because the Soviet Union lacked the ability to produce precision strike capable missiles, the Soviet Union developed ship-launched tactical nuclear missiles. The Soviets knew that within a certain proximity, precision was unnecessary, and that nuclear weapons could disable or destroy an entire carrier strike group. Therefore, the United States can expect the Russian Federation Navy to heavily rely on the use of submarines for deterrence, interdiction, and to disrupt sea lines of communication. The Russian Federation will probably continue to rely on advanced nuclear missiles in the same manner as the Soviet Navy, to counterbalance against the

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<sup>156</sup> Gorshkov, *The Sea Power of the State*, 98–101.

<sup>157</sup> Gorshkov, 98–101.

<sup>158</sup> Gorshkov, 171–173.

United States' conventional capabilities. Whether the Russian Federation will launch non-strategic nuclear weapons is a different question and will not be answered here.<sup>159</sup> Finally, Russia will continue to operate without a carrier capability for many reasons, including affordability.

Sixth, Russia will advance a legal argument to justify its next aggressive land grab or altercation at sea. Some, such as Mikheil Saakashvili, believe that Putin will soon make a new strategic move in the near-future to expand Russian territory.<sup>160</sup> It is likely that if this happens, Russia will utilize legal rhetoric, as it did in Ukraine and Georgia, to justify its actions. As recently as 15 December 2018, Russia began building up its troops along the Eastern Ukrainian border, causing analysts to believe that another invasion might be imminent.<sup>161</sup> Furthermore, some suggest that Russia may be planning to reclaim some of its Soviet boundaries.<sup>162</sup> This is further evidenced in a report by Mathieu Boulegue, in which he asserts that Russia's Arctic ambition is Russia "simply re-establishing a military presence that used to be the norm during the Cold War."<sup>163</sup> Thus, Russia's Arctic activity can be seen as reclaiming what they believe is historically theirs. It is natural to assume that Russia will invade Eastern Ukraine or seize other territories conducive to the fulfillment of its naval policy and fleet development, and to reclaim its Soviet boundaries. The United States should be alert for further action in Ukraine and should, therefore, increase its cooperation with the Ukrainian Navy in the Black Sea. The United States will

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<sup>159</sup> Christopher Woody, "Russia Reportedly Warned Mattis It Could Use Nuclear Weapons In Europe, And It Made Him See Moscow As An 'Existential Threat' To The US," Business Insider, September 14, 2018, <https://www.businessinsider.com/russia-warned-mattis-it-could-use-tactical-nuclear-weapons-baltic-war-2018-9>.

<sup>160</sup> Mikheil Saakashvili, "Russia's Next Land Grab Won't Be in an Ex-Soviet State. It Will Be in Europe," Foreign Policy, last modified March 15, 2019, <https://foreignpolicy.com/2019/03/15/russias-next-land-grab-wont-be-in-an-ex-soviet-state-it-will-be-in-europe-putin-saakashvili-sweden-finland-arctic-northern-sea-route-baltics-nato/>.

<sup>161</sup> Andrew E. Kramer, "Ukraine Asserts Major Russian Military Buildup on Eastern Border," The New York Times, last modified December 15, 2018, <https://www.nytimes.com/2018/12/15/world/europe/ukraine-russia-military-buildup.html>.

<sup>162</sup> Pavlo Klimkin, "Putin's Desire for a New Russian Empire Won't Stop With Ukraine," The Guardian, last updated March 25, 2017, <https://www.theguardian.com/commentisfree/2017/mar/25/putin-new-russian-empire-ukraine>.

<sup>163</sup> Boulegue, *Russia's Military Posture in the Arctic: Managing Hard Power in a 'Low Tension' Environment*, 26.

need to capture incidents at sea, as they did during the altercation on 7 June 2019, and rapidly publish media to stay ahead of any narrative spin by Russia. This is important, because Russia, per its naval policy, is intent on controlling the maritime narrative to justify its coercive and non-coercive actions.

Seventh, the Russian Federation's intention to use the media to bolster national support is not unique, alarming, or out of line with other nations. Modern media is a powerful outlet utilized for glorifying the military, boosting national pride, increasing recruitment numbers, internal and external signaling, etc. The use of media by the Russian Federation is different from media employment under the Soviet regime in that it is not a means of propagating communism, nor does it challenge the western capitalist narrative. Showing great ships on various mediums does not now, for Russia, communicate that communism is superior to capitalism. However, it does communicate that Russia's economy is healthy and capable of producing an expensive fleet and that Russia is a military superpower; the validity of that media presentation, however, is suspect. Like the Soviet Union, the Russian Federation's news media are state owned, state funded, or owned by businesses favored by the Kremlin in exchange for loyalty; therefore, the government controls the media narrative. In both instances, under the Russian Federation and in the Soviet Union, consumption is meant for both foreign and domestic audiences, for internal and external signaling. The Russian Federation, as exhibited in Putin's March 1st speech, overstates its weapons capabilities and the stages of their development.

### **C. CONCLUSIONS FOR THE U.S. NAVY**

The United States must fill its current capability gaps and correct imbalances if it desires to confront or defeat Russia in a fight at sea, particularly in areas of strategic importance to Russia. The U.S. Navy currently has four points of imbalance: an over-reliance on carriers, a limited mine-warfare (MIW) capability, lack of a sufficient green-water capability, and inconsistent funding. This section will evaluate those imbalances and provide additional implications for future naval strategy.

First, the United States is the only navy in the world with eleven aircraft carriers; it should consider limiting future production to support the development of other much

needed assets. For perspective, China is the second largest holder of carriers, currently possessing two, with a plan to produce six by the mid-2030s, all of which are smaller than the United States' Ford-class carrier.<sup>164</sup> Russia's only carrier, the Kuznetsov, is in a state of repair and cannot be operational in the near-term.<sup>165</sup> According to the latest Shipbuilding and Conversion, Navy budget (SCN), the current price for a carrier is \$13 billion, and the United States plans to build two additional carriers by 2028.<sup>166</sup> The aircraft wing on each carrier costs approximately \$7 billion. The U.S. Navy plans to retire three carriers, bringing the total carrier count to ten by 2028. Even if China is successful at building six smaller carriers by the mid-2030s, the United States will still outnumber China's carrier fleet by at least four. Russia will be unable to build six or ten carriers by the mid-2030s to compete. There are two major problems, other than costs, for carriers. First, they require other ships for protection. Carriers, apart from their airwings and ships in company, do not possess their own AEGIS like defense.<sup>167</sup> Therefore, carriers require other ships for protection. Second, carriers are vulnerable to the missiles developed by Russia and China, and the United States currently has no reliable defense against them.<sup>168</sup> Even if a carrier has its aviation assets airborne, and ships in company are ready to defend the carrier, those assets may not be capable of defending against missiles launched by Russia or China, especially newer missiles with hypersonic capabilities. A carrier's best defense, then, is distance. In short, the United States can afford to prolong the life of its

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<sup>164</sup> David Axe, "China's Navy Will Soon Have Aircraft Carriers Like America (In At Least 1 Key Area)," *National Interest* (blog), last modified May 7, 2019, <https://nationalinterest.org/blog/buzz/chinas-navy-will-soon-have-aircraft-carriers-america-least-1-key-area-56262>.

<sup>165</sup> Richard A. Moss and Ryan Vest, "Russia's Only Aircraft Carrier-A 2<sup>nd</sup> Lease on Life or a Slow Death?," *Proceedings* 145, 1397 (July 2019), <https://www.usni.org/magazines/proceedings/2019/july/russias-only-aircraft-carrier-2nd-lease-life-or-slow-death>.

<sup>166</sup> Office of the Chief of Naval Operations, *Report to Congress on the Annual Long-Range Plan for Construction of Naval Vessels for Fiscal Year 2019*, (Washington, DC: Chief of Naval Operations, 2019), 9–12, [https://www.secnav.navy.mil/fmc/fmb/Documents/19pres/LONGRANGE\\_SHIP\\_PLAN.pdf](https://www.secnav.navy.mil/fmc/fmb/Documents/19pres/LONGRANGE_SHIP_PLAN.pdf); Franz-Stefan Gady, "US Navy's \$13 Billion Supercarrier Just Got Even More Expensive," *The Diplomat*, last modified May 15, 2018, <https://thediplomat.com/2018/05/us-navys-13-billion-supercarrier-just-got-even-more-expensive/>.

<sup>167</sup> Robert Farley, "Blood in the Water: Russia or China Could Sink a U.S. Navy Carrier Using These Things," *National Interest* (blog), last modified June 8, 2019, <https://nationalinterest.org/blog/buzz/blood-water-russia-or-china-could-sink-us-navy-carrier-using-these-things-61597>.

<sup>168</sup> Farley, "Blood in the Water: Russia or China Could Sink a U.S. Navy Carrier Using These Things."

existing carriers and forego the production of new carrier assets. By cutting production of one carrier, the U.S. Navy could reallocate at least \$20 billion in ship and aircraft procurement costs to address other capability gaps, such as the purchase of new littoral warfare and mine-countermeasure ships.

Second, the United States lacks an effective mine-warfare platform and the LCS is not an ideal replacement; therefore, the United States should consider investing in already existing MCM designs. The only mine-warfare platform currently in the United States' surface navy inventory is the Avenger-class MCM. Having served onboard an MCM as the navigator, I can say that the ship is unreliable underway in its roles as a mine-hunter and minesweeper. The MCM is an aging platform, and many of its parts are no longer available because the manufacturer, Isotta-Fraschini, no longer manufactures parts for its propulsion plant and engineering systems.<sup>169</sup> The operational environment, at least in the Arabian Gulf, and other confined waters is unforgiving. The Arabian Gulf frequently endures high sea temperatures.<sup>170</sup> This takes a toll on both the engines and combat systems which utilize the ocean water for cooling. This, at times, requires for the systems to be shutdown, or to operate at a reduced capacity to prevent issues associated with overheating, and degrades the MCM's ability to perform its primary function as a warship—to find and kill mines. According to the SCN, the U.S. Navy currently plans to expedite the retirement of its continental United States (CONUS) based MCMs and to scrap these for repair parts for its forward deployed assets.<sup>171</sup> This is problematic because many of those parts are already unreliable and cannot be relied on for ship repair. The United States also plans to replace the Avenger-class with LCS' equipped with MIW mission packages. Replacement of the MCM is necessary; however, replacement by LCS is problematic for two reasons: the LCS is expensive, and it is not survivable. The estimated cost per unit of LCS is \$523.7

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<sup>169</sup> Office of the Chief of Naval Operations, *Report to Congress on the Annual Long-Range Plan for Construction of Naval Vessels for Fiscal Year 2019*, 6–7.

<sup>170</sup> Daniel Bardsley, "Arabian Gulf in Hot Water as Sea Temperatures are Rising Faster Than Expected," *The National*, last modified January 12, 2019, <https://www.thenational.ae/uae/environment/arabian-gulf-in-hot-water-as-sea-temperatures-are-rising-faster-than-expected-1.812345>.

<sup>171</sup> Office of the Chief of Naval Operations, *Report to Congress on the Annual Long-Range Plan for Construction of Naval Vessels for Fiscal Year 2019*, 6–7.



million.<sup>172</sup> Furthermore, according to the *FY17 Annual Report*, the LCS is not survivable, and will not likely survive a single hit.<sup>173</sup> Further investment into the LCS program is an expression of sunk cost bias. In short, the United States needs a better, already effective, and less expensive alternative similar to mincraft in many other navies. Mines are a cheap and cost-effective way to exercise sea denial, to disrupt the free flow of commerce, and to sink expensive warships. If the United States were to confront the Russian Federation at sea, it should expect to encounter mines at strategic chokepoints in the Mediterranean Sea, the Strait of Hormuz and Bab-el-Mandeb, in the areas of the Black Sea, the Baltic Sea, the Norwegian Sea, the North Sea, the adjacent seas, and essentially anywhere Russia operates. The United States, then, should invest in an existing minesweeper to rapidly restore its MCM assets.

Third, the green-water capability of the United States is insufficient and will remain so until the United States parts with the LCS program and considers an alternative to, or at least in conjunction with the production of the new Guided Missile Frigate (FFG(X)). The aging Cyclone class Patrol Craft Coastal (PC) will need replacement and the LCS has not been a success.<sup>174</sup> According to the *FY17 Annual Report*, the LCS not only lacks survivability in a high intensity environment, it is unreliable mechanically and lacks lethality.<sup>175</sup> Each LCS currently costs an estimated \$523.7 million.<sup>176</sup> Steps are being taken to increase the lethality of the LCS platform, but they will not increase its

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<sup>172</sup> Ronald O'Rourke, *Navy Littoral Combat Ship (LCS) Program: Background and Issues for Congress*, CRS Report No. RL33741 (Washington, DC: Congressional Research Service, 2019), 6, <https://fas.org/sgp/crs/weapons/RL33741.pdf>.

<sup>173</sup> Director of Operational Test and Evaluation, *FY 2017 Annual Report* (Washington, DC: Pentagon, 2018), 190, <https://www.dote.osd.mil/pub/reports/FY2017/pdf/navy/2017lcs.pdf>.

<sup>174</sup> Task and Purpose, "No Battleship: The Littoral Combat Ship Might Be the Navy's Worst Warship," *National Interest* (blog), April 5, 2019, <https://nationalinterest.org/blog/buzz/no-battleship-littoral-combat-ship-might-be-navys-worst-warship-50882>.

<sup>175</sup> Director of Operational Test and Evaluation, *FY 2017 Annual Report*, 190; Task and Purpose, "No Battleship: The Littoral Combat Ship Might Be the Navy's Worst Warship."

<sup>176</sup> O'Rourke, *Navy Littoral Combat Ship (LCS) Program: Background and Issues for Congress*, 6.

survivability.<sup>177</sup> The United States should expect to fight in the littorals. In short, the U.S. Navy needs to develop or procure an alternative solution to the LCS to combat the Russian Federation in the littoral waters.

Fourth, lack of funding and shortsightedness has resulted in a lack of advancement in capabilities for the United States. A recent report, *Providing For the Common Defense*, conducted by the Commission of the National Defense Strategy for the United States, concluded that defense cuts in the Budget Control Act of 2011 have resulted in “detrimental effects on the size, modernization, and readiness of the military.”<sup>178</sup> Under these cuts, the “military had difficulty carrying out the more modest objectives of its defense strategy,” and resulted in “\$539 billion in cuts to base national defense spending between 2012 and 2019.”<sup>179</sup> More disconcerting, the report found that “America’s advantage across a range of operational challenges has diminished,” because of these cuts.<sup>180</sup> Most damning is that the report concluded that “if China attacked Taiwan or Russia attacked the Baltic states...it seems unlikely the United States could force its adversary to back down.”<sup>181</sup> In short, if the U.S. cannot provide for its fleet, it may find itself in a position of vulnerability. Furthermore, the United States has known for several years that China and Russia have both been developing hypersonic weapons. In a similar scenario, Gorshkov highlighted the inability of the Soviet Union to properly identify the developments made to surface forces within the Japanese Fleet. He says that while the Soviet Fleet had outnumbered the Japanese Fleet, it was no match for the light-armored vessels. This shortsightedness, he

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<sup>177</sup> Darwin McDaniel, “Navy Tasks Lockheed to Increase LCS Fleet Lethality, Survivability,” *Executive Biz* (blog), November 19, 2018, <https://blog.executivebiz.com/2018/11/navy-tasks-lockheed-to-increase-lcs-fleet-lethality-survivability/>; Megan Eckstein, “Navy Completed Hellfire Tests on Littoral Combat Ship, Will Likely Deploy Later This Year,” USNI News, last modified July 3, 2019, <https://news.usni.org/2019/07/03/navy-completed-hellfire-tests-on-littoral-combat-ship-will-likely-deploy-later-this-year>.

<sup>178</sup> National Defense Strategy Commission, *Providing for the Common Defense* (United States: United States Institute of Peace, 2018), vi, <https://www.usip.org/publications/2018/11/providing-common-defense>.

<sup>179</sup> National Defense Strategy Commission, *Providing for The Common Defense*, 50.

<sup>180</sup> National Defense Strategy Commission, vii.

<sup>181</sup> National Defense Strategy Commission, 20.

says, led to disaster.<sup>182</sup> Similarly, the United States has known about these weapons since the 1960s and have failed to develop their own. In an article titled, “We Cannot Go On: Disruptive Innovation and the First World War Royal Navy,” author Gautam Mukunda applies his theory of generalized disruptive innovation, a modified version of disruptive innovation theory, to the military apparatus. The theory itself exists to answer why “good organizations fail.”<sup>183</sup> Without going into great length, generalized disruptive innovation theory can be applied to the abovementioned situation. In this theory, the United States relies on its sustaining innovation, its carriers, which provide for its success and “highest priority tasks.”<sup>184</sup> The Soviet Union, China, and now the Russian Federation, have developed hypersonic and carrier killing weapons, which are their disruptive innovations. Mukunda says that because “organizations focus on the primary task [their sustaining innovation] and develop organizational competencies in it, they will tend to ignore disruptive technologies, even if they are adept at sustaining ones.”<sup>185</sup> As previously outlined, these technologies and the carrier strike group have existed for more than forty years; however, during that time, the United States has focused on its sustaining innovation, while Russia and China have sought improvement to their missile capabilities which challenge the United States’ carrier fleet. The problem is that the United States has had ample time to acknowledge these disruptive threats and counter-adapt; however, it has not.

The United States should think creatively to exploit the element of surprise in the littoral regions. In his study, *The New Navy Fighting Machine*, CAPT (Ret.) Wayne Hughes recommends the conversion of merchant and tanker vessels for use in war, particularly as a carrier variant light (CVL).<sup>186</sup> The purpose of these ships is to distribute lethality similar to, but less than, that of a carrier, from a vessel that is purchased and operated at a fraction of the cost of a conventional carrier. The CVL can be risked in blue or green waters and

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<sup>182</sup> Gorshkov, *The Sea Power of the State*, 255.

<sup>183</sup> Gautam Mukunda, “We Cannot Go On: Disruptive Innovation and the First World War Royal Navy,” *Security Studies* 19, no. 1 (February 26, 2010), 159, <https://www.tandfonline.com/doi/abs/10.1080/09636410903546731?journalCode=fsst20>.

<sup>184</sup> Mukunda, “We Cannot Go On: Disruptive Innovation and the First World War Royal Navy,” 128.

<sup>185</sup> Mukunda, 129.

<sup>186</sup> Hughes, *The New Navy Fighting Machine*, 25–30.

would carry a complement of F-35Bs. In his study, Mr. Hughes and a cohort from the Naval Postgraduate School, estimate the cost of each CVL around \$3 billion.<sup>187</sup> Other variants could be made specifically for troop transport. In “We Cannot Go On: Disruptive Innovation and the First World War Royal Navy,” author Gautam Mukunda notes how the British tried to adapt to the threat of German submarines by converting merchant ships into submarine hunters outfitted for finding and destroying German submarines during the First Battle of the Atlantic in 1917.<sup>188</sup> He notes that despite their attempts, the British were only marginally successful “once U-boats began attacking without warning,” sinking only one in five submarines.<sup>189</sup> In a similar manner, the United States could purchase and modify existing tankers, or container ships, to carry TLAMs or anti-ship missiles. These ships could deploy USVs with passive ASW sensors to relay sensor data to the fleet. If the converted ships were employed in a routine way, it may be possible to operate them where they would not normally arouse suspicion. However, they are limited by their lack of defense, acceleration and maneuverability. Once missiles are launched, these vessels may not be able to maneuver before being struck by retaliatory strikes, so their crews should remain small. What is most significant about utilizing merchant vessels, or tankers, is that they are composed of simple inexpensive systems. The recent advent of the AEGIS laptop “virtual twin” system could provide plug-n-play capabilities to commercial shipping vessels allowing for weaponization and the ability to rapidly convert or modify other vessels.<sup>190</sup> If small or converted vessels employed the AEGIS laptop, they could inexpensively tap into only the portions of AEGIS required for their simpler mission. Cargo vessels could become a delivery vehicle for electromagnetic attack, which may be a game changer (a disruptive innovation) against weapons systems like the S-300s and S-400s (sustaining innovations for anti-axis area denial (A2/AD)) located in littoral regions. The electro-magnetic pulse (EMP) capability could also be delivered via small boat. In short,

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<sup>187</sup> Hughes, 27.

<sup>188</sup> Mukunda, “We Cannot Go On: Disruptive Innovation and the First World War Royal Navy,” 149.

<sup>189</sup> Mukunda, 150.

<sup>190</sup> Megan Eckstein, “Aegis Combat System ‘Virtual Twin’ Pilot Program Could Lead to Fielding Faster Upgrades,” USNI News, December 6, 2017, <https://news.usni.org/2017/12/06/aegis-combat-system-virtual-twin-pilot-program-lead-fielding-faster-upgrades>.

retrofitting small or large commercial ships may be simpler and more affordable. The United States could also utilize fishing vessels. Fishing vessels occupy a place in both the Russian Federation naval policy and in Gorshkov's navy. Not only are fishing vessels beneficial to the shipping industry of the state, they can serve as reconnaissance or missile boats able to operate and fight in the littoral areas. Their smaller size would allow them to effortlessly blend into the surrounding environments of islands, coastal shipping and fishing traffic.

A major implication derived from this study is that the next major naval conflict with Russia will not likely occur in blue waters. Conflicts with Russia on the high seas might not occur, but Russia, due to its many constraints, will be more active in the littoral areas and the Arctic, and will employ a coastal defense, sea control, or sea denial strategy to deny the United States access to those waters. A major conflict, then, will likely occur in the littorals. Thus, the United States must adapt to compete in the littoral waters—an area which the United States currently lacks a suitable capability. Furthermore, the United States should expect to enact strategies of sea control, sea denial, and mining in the areas of the Aegean Sea, the Black Sea, the Baltic Sea, the North Sea, the Barents Sea, the Norwegian, the Mediterranean Sea and the Bering Sea. The United States should also explore a strategy of containment in the Arctic by controlling access through the Bering Sea and Norwegian Sea regions. Sea denial in the Arctic will be exceptionally difficult for the United States, since the United States does not normally operate in the Arctic environment, lacks an Arctic capability, and Russia has already established its North fleet there. Blocking the endpoints to deny commercial transits in the Arctic may be the United States' best strategy. In summary, by not producing a viable littoral capability, the United States is at risk of being unable to compete in critical waters vital to the Russian Federation. The United States' blue fleet is too valuable to risk in the littorals where it will be vulnerable to Russia. The United States needs a viable, lethal, dispersible, and expendable green-water fleet.

As a result of budget constraints and lack of shipbuilding facilities, the Russian Federation's auxiliary arm is also weak; therefore, if at war, the United States should not only enact a strategy of naval containment but target Russian Federation auxiliary vessels

early. In this way, the United States could impact Russia's operations at sea and force their ships into port, where the U.S. Navy could blockade them or sink their vessels pier-side. Removing the auxiliary component of the Russian Federation Navy will diminish its ability to refuel, replenish, and re-arm at sea, and greatly affect its stay-time and operational capability in AORs.

A final implication for the United States is that to impact the Russian Federation's naval policy aspirations, the United States should pursue an energy proposal with members of the European Union to reduce or eliminate Europe's energy dependence on Russian energy by increasing Europe's reliance on American POL. Presently, the European Union imports 30 percent of its oil and 40 percent of its gas from Russia.<sup>191</sup> German politicians have committed to denuclearizing Germany by 2022, which will further increase Germany's reliance on Russian energies.<sup>192</sup> In an article titled "Germany's Dependence on Imported Fossil Fuels," author Julian Wettengel notes that Germany imports 63.5 percent of its energy.<sup>193</sup> She notes that in 2017 and 2018, Russia was the largest supplier of oil, gas and coal to Germany. By reducing or eliminating the European Union's energy reliance on Russia, it could reduce Russian Federation revenues in a major way. Because the Russian Federation has failed to diversify its economy, which now relies mostly on energy exports, the European Union, the United States, and NATO, could affect the Russian Federation economy and adversely affect its defense industry, military readiness, and naval aspirations.

#### **D. RECOMMENDATIONS FOR FUTURE U.S. NAVAL STRATEGY**

This thesis provides three recommendations for future U.S. naval strategy: the United States should invest in new MCM platforms; the United States should adopt a

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<sup>191</sup> "Shedding Light on Energy in the EU a Guided Tour of Energy Statistics: 2019 Edition," European Commission, 2019, 8, <https://ec.europa.eu/eurostat/cache/infographs/energy/images/pdf/pdf-energy-eurostat-2019.pdf>.

<sup>192</sup> Rebecca Staudenmaier, "Germany's Nuclear Phase-out Explained," DW, last modified June 15, 2017, <https://www.dw.com/en/germanys-nuclear-phase-out-explained/a-39171204>.

<sup>193</sup> Julian Wettengel, "Germany's Dependence on Imported Fossil Fuels," Clean Energy Wire, 2019, <https://www.cleanenergywire.org/factsheets/germanys-dependence-imported-fossil-fuels>.

comprehensive maritime strategy and new tactics to confront Russia (and China); and, the United States should adopt and integrate the Counter-electronics High-powered Microwave Advanced Missile (CHAMP), or similar missile equipment, into its TLAM to combat S-400s in foreign surface navies. These recommendations are based on the assessment of existing capability gaps within the U.S. Navy, and the Russian Federation naval policy.

The United States should invest in existing platforms to fulfill existing MCM capability gaps. Based on my experience on an Avenger-class MCM which operated with British and Australian minehunter and mine-countermeasures ships, I recommend that the United States purchase replacements for the Avenger-class from the British, or a NATO ally with a proven platform. This may be beneficial for six reasons.

First, the British Hunt-class and Sandown-class ships are more reliable. In most instances, the British can go to sea to conduct exercises while MCMs are generally in some state of repair. During exercises, the British platforms outperformed the MCMs because they were combat ready. Furthermore, the LCS MCM module is an inadequate replacement for the Avenger-class and is experiencing constant delay.

Second, the United States, the United Kingdom, and Australia use the same mine disposal system—SeaFox. Since the British, Australian, and United States navies use the same system, sailors from the MCM could easily transition to British or other NATO member ships without having to relearn a new combat system. As with any new platform, sailors from an MCM would necessarily have to be trained on other existing systems. However, this is no different than the introduction of any other new platform. Furthermore, other NATO allies, such as the French and Belgians, also currently utilize SeaFox. This, then, increases international cooperation and buy-in into an existing capability.

Third, the United States would benefit from an already existing support network. Because the British and Australian ships are forward deployed to Bahrain, so are their parts and ship support teams. One instance where this may be beneficial is in rafting. Both British and American ships are equipped with thrusters. The MCM does have a forward thruster; however, in my experience in Bahrain, it is usually not operational and overheats within

minutes. Not having an operational thruster makes an already dangerous evolution more dangerous. If the United States shared an MCM platform, parts and support would be readily available and could mitigate current risks associated with Avenger-class ships rafting with British auxiliary ships at sea. Furthermore, sharing platforms would increase interoperability at sea with the British and mitigate the current risks associated with rafting MCMs with British auxiliary ships, not only because parts and ship support would be available, but because the British ships are also designed to fit alongside their auxiliary ships, and away from its forward and aft thrusters. The availability of parts and support are also critical to readiness. Sharing a platform would increase the availability of parts, support, and result in increased operational readiness.

Fourth, purchasing surface platforms from the British could increase NATO cooperation and provide mutual economic benefit. While investment in a new U.S. platform has advantages, for the sake of less cost and rapidly fielding assets, NATO as a collective should produce a joint mine-countermeasures or hunter platform. Investment into NATO countries may assist in increasing NATO's defense spending.

Fifth, the British hunter and countermeasure ships are significantly cheaper than the LCS. The current cost of an LCS is \$523.7 million. During its time of production, the Hunt-class sold for \$81.5 million, while the Sandown-class sold for approximately \$50 million.<sup>194</sup> For roughly the same cost as an LCS, the United States could purchase four Hunt-class and four Sandown-class ships, or even four new MCMs.

In short, mine-warfare is a major capability gap that the United States cannot currently fill. The LCS is not the right answer, and purchase of ships from the British, while potentially beneficial, is unlikely since these ships are no longer in production; however, if production could be resumed, the United States could rapidly patch this capability gap until a future solution is available. Furthermore, instead of creating its own solution, the United States should work jointly with the British, French, and Belgians who are currently in the

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<sup>194</sup> "Sandown Class," Forecast International, February, 2003, [https://www.forecastinternational.com/archive/dispatch\\_old\\_pdf.cfm?ARC\\_ID=1796](https://www.forecastinternational.com/archive/dispatch_old_pdf.cfm?ARC_ID=1796); Arun Matthew, "Royal Ships HMS Blyth, HMS Ledbury Arrives in Doha, Qatar," DefPost, February 26, 2018, <https://defpost.com/royal-navy-ships-hms-blyth-hms-ledbury-arrives-doha-qatar/>.



process of creating a replacement for their own ageing ships.<sup>195</sup> Cooperation should reduce the costs of research, development and production, more rapidly field the vessels, and it would be mutually beneficial for the NATO alliance economically and contributes to burden sharing and cooperative defense.

The United States needs a comprehensive strategy; it also needs to alter its force structure and tactics. CAPT (Ret.) Wayne P. Hughes proposes a limitation to the new construction of advanced, but expensive in large numbers, nuclear submarines, carriers, and large amphibious ships, and emphasizes the production of new green-water assets.<sup>196</sup> By reducing the production of these expensive assets, Hughes asserts that funding for the same SCN budget could be shifted to produce and maintain a fleet of combined blue and green-water assets totaling more than 600 vessels. Hughes emphasizes the need for more submarines but recommends that perhaps half of these submarines should be diesel-electric air independent propulsion option, with as much or more capability for shallow water operations, and at a significant price reduction. He says that this could also produce market competition and potentially drive down the costs for present assets and lead to further technological advancements. In addition to diesel-electric submarines, Hughes also advocates smaller surface combatants with small crews. The smaller ships would possess the offensive capabilities of their Guided Missile Cruiser (CG) and Guided Missile Destroyer (DDG) kin but would increase the navy's footprint and achieve a more distributed lethality. What is significant about Hughes' study is that it was conducted in 2009, was delivered to, and commissioned by, the Secretary of Defense's Office of Net Assessments, and could have, if implemented, caused Russia to hesitate before the invasion into Crimea. Had the United States implemented Hughes' ideas, the United States could have had a fleet presence in the Aegean and Black Sea. Their presence could have served as a deterrence. *The New Navy Fighting Machine* was also intended to counter the Chinese

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<sup>195</sup> "STX France, EDR, Socarenam Team for Belgian Mine Countermeasure Project," Naval Today, last modified January 1, 2018, <https://navaltoday.com/2018/01/31/stx-france-edr-socarenam-team-for-belgian-mine-countermeasure-project/>.

<sup>196</sup> Hughes, *The New Navy Fighting Machine*, vii-ix.

maritime threat. If implemented, the more distributable U.S. fleet could restrain both the Chinese and Russian threats by leveraging the sea denial capability of the green-water fleet.

*The New Navy Fighting Machine* also outlines benefits for members of the navy. Not only does it more than double the number of ships in the U.S. Navy's fleet, it also provides more command opportunities for young officers. It provides flexibility in options for sailors, who would benefit from more specialized training. Restructuring the naval force structure of the United States, in the way recommended by CAPT (Ret.) Hughes and his team, is beneficial for nine reasons: (1) it extends to current U.S. naval strategy; (2) it expands the nodal network; (3) it expands the active and passive sensor network and its reach; (4) it builds smaller vessels that are expendable; (5) small combatants are less detectable; (6) smaller vessels may be more effective at disrupting the S-400 system; (7) smaller vessels and converted merchant ships may be able to exploit the Montreux Convention in the United States' favor; (8) and, smaller vessels contribute to distributed basing which should increase international cooperation and reassure U.S. allies that the United States will support them when their presence is needed; (9) smaller vessels may be more agile in the arctic than a blue-water fleet.

By building smaller, more affordable, surface combatants the United States can expand and further distribute its lethality in more ways than can be done with the proposed FFG(X). Take for instance the proposed corvette.<sup>197</sup> Since the vertical launch system is comprised in cells of eight tubes, the vessel could support at least forty-eight missiles, or six cells. This is sixteen more missiles than currently proposed with the FFG(X); however, the cost of this corvette is estimated at \$200 million. For the cost of one FFG(X) the United States might purchase three corvettes. Now, for the cost of an FFG(X) equipped with thirty-two missile tubes, the United States can purchase three corvettes equipped with forty-eight missile tubes each, for a total of one hundred and forty-four launch tubes, and deploy them to three different littoral regions. Furthermore, for the cost of one carrier, the U.S. Navy could purchase a compliment of over fifty corvettes carrying two thousand five hundred VLS tubes. It should be noted that the VLS tubes can house other missiles than the TLAM,

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<sup>197</sup> Hughes, 45-50.

with as many as four missiles per tube depending on the missile variant. This effectively increases the number of TLAMs, or other missiles, that can be on station in many areas of operations and hosted by many allies and friendly countries supported by the United States. This is especially beneficial in combat because these vessels will be targeted after launches. Through further distribution, the United States can increase the number of threat axes to which the enemy must respond and produces an environment in which the enemy may be incapable of effectively responding with a hard kill.

Second, it expands the decentralized, mesh communications network. More ships equate to more nodes and further decentralization. This could be especially beneficial because it may allow more assets to go “dark,” that is, cease their active emissions resulting in a decrease in their signals footprints. These vessels could receive passive communications and only activate when necessary to prosecute a target, to pass sensitive information, or in a restricted navigation environment. Furthermore, mesh communications could allow assets to use passive communications to triangulate their positions, receive contact information, and minimize reliance on global positioning satellites (GPS) outside of territorial waters (TTW), therefore mitigating the effects of Russian attempts at GPS jamming. Furthermore, smaller vessels in the littorals will be closer to other nations’ communications networks. It would be advantageous for the United States, NATO and other partner nations, to allow for backdoor, or tunneled 4G LTE and 5G communications. By doing this, the U.S. Navy would further conceal its communications by operating in areas of congested emissions and successfully hide its own emissions. Furthermore, by utilizing unmanned underwater vehicles (UUV), the United States could potentially partner with allied nations to bridge communications across littoral waters, essentially creating a cloud of emissions to further conceal its communications, or other emissions, resulting in the creation of an extremely difficult environment for enemy targeting.

Third, more nodes equal more sensors, and more sensors equates to a better combat picture. By constructing more small surface combatants, the U.S. Navy can expand its active and passive sensor “drag-net” in the littorals, blue-waters and over land (via SPY-6). If each vessel is equipped with active and passive capabilities (like FFG(X), CG and DDGs), then the United States could impose an extremely difficult operating environment

on Russian, Chinese, and North Korean submarines, surface ships, and aircraft while also expanding its layered defense and detection zones. The advent of the AEGIS laptop and SPY-6 could bring these capabilities, or some of them, to smaller combatants.

Fourth, smaller vessels are more expendable. As noted in the *New Navy Fighting Machine*, by investing in smaller vessels, the U.S. Navy can incorporate them into the layered defense concept and pull high valued assets farther out of reach of enemy weapons; particularly out of reach of the missiles being developed by Russia and China.<sup>198</sup> This would be particularly beneficial in the Arabian Gulf. DDGs and CGs are quite susceptible to swarm attacks by Iranian vessels and are covered by Iranian anti-ship missiles. An increased number of smaller combatants would be more effective against swarm tactics there and could enable the U.S. Navy to redeploy DDGs and CGs to the Mediterranean to provide support to both the Fifth and Sixth Fleets, or direct them to other areas of concern, like the Atlantic and Pacific.<sup>199</sup> In short, a small combatant provides the United States the ability to withdraw its more costly assets and substitute them with capable small combatants in areas where CGs and DDGs may be at risk, and where it is more cost effective to risk smaller, but able, green-water vessels capable of executing a sea-denial strategy. It should also be noted that *The New Navy Fighting Machine*, highlights the ability of the United States to further cut costs by creating mission specific platforms. I think that with the “plug-n-play” nature of the AEGIS laptop, the United States could seize on this idea and invest in a single ship design, only to develop from it for each required capability; Some might eventually be multi-mission. All ships, however, could be equipped with SPY-6 and newest variant of SLQ-32, if the United States wishes to employ vessels no smaller than corvettes.

Fifth, smaller vessels have a smaller radar cross-section. At sea, small vessels like dhows and fishing boats are generally difficult to track because of their size and composition. DDGs and CGs, because of their stealthy angles and radar absorbing materials are also difficult to track, as compared to merchant vessels. By creating smaller

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<sup>198</sup> Hughes, 3.

<sup>199</sup> Hughes, viii.

surface vessels with still smaller radar cross-sections and radar absorbing materials, the United States will be able to operate almost undetected in dangerous coastal waters where blue-water ships cannot easily access, affording them the ability to exploit the element of surprise in conflict. Smaller vessels will be more difficult to target, especially by anti-ship hypersonic missiles, because of their decreased radar cross sections and high maneuverability. Since they also possess a smaller surface area, magnetic signature, and reduced heat signatures, enemy advanced missiles designed for larger targets will likely be ineffective against the small combatants.

Sixth, smaller vessels may be problematic for the S-400. In a study by the Swedish Defence Research Agency, the agency concluded that the Russian S-400 A2/AD system's capabilities are grossly overestimated.<sup>200</sup> What they found is that in areas where the system is deployed (particularly Syria), "Russia's A2/AD capability is less effective than what is claimed by either the Russian military or the Western press."<sup>201</sup> Although, they say, it was deployed in Syria, "Syrians haven't managed to shoot down a single Western plane, in thirty years, only an isolate few Israeli planes."<sup>202</sup> Furthermore, they say that "analysis shows that the actual range...is actually 150–200 kilometers. Against low-flying missiles, the S-400's range may be as short as 20 kilometers."<sup>203</sup> They also add that the system can be countered with passive and active sensors, soft and hard kill options, and that "one can neutralize an entire system by knocking out just one link in a functional chain."<sup>204</sup> This carries significant tactical implications for the United States. First, the United States can get much closer than it presumed and remain outside of effective targeting distances. Second, the system has a significant source of failure, and if it can be exploited, then the remainder of the system will crash. Third, the system does not do well against low-flying objects; i.e., cruise missiles. Fourth, the United States may be able to leverage these smaller

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<sup>200</sup> "Russian A2/AD Capability Overrated," Swedish Defense Research Agency, March 4, 2019, <https://www.foi.se/en/foi/news-and-pressroom/news/2019-03-04-russian-a2-ad-capability-overrated.html>.

<sup>201</sup> Swedish Defense Research Agency, "Russian A2/AD Capability Overrated."

<sup>202</sup> Swedish Defense Research Agency.

<sup>203</sup> Swedish Defense Research Agency.

<sup>204</sup> Swedish Defense Research Agency.

combatant capabilities to defeat Russia's bastion defense concept in areas like the Arctic.<sup>205</sup> Most importantly, this is where the application of a strategy like Hughes' would be most beneficial. Not only does it create various threat axes for the enemy to respond to, it prevents the United States from having to risk its expensive aircraft, or ships, while targeting S-400 sites. If the United States adds a merchant based EMP, or the Air Force's CHAMP missile technology and adapts it to the TLAM for launch via VLS, the green-water fleet may be even more threatening to S-400 systems than cruise or radiation seeking missiles alone.

Seventh, smaller vessels and converted merchant ships may be able to exploit restrictions and tonnage allowances of the Montreux Convention, resulting in access into the Sea of Azov, and an increased number of U.S. flagged warships in the Black Sea at any given time. First, the Montreux Convention does not limit merchant vessels, but instead protects the right of merchants under "any flag and with any kind of cargo, without formalities."<sup>206</sup> Second, the convention specifies that up to nine small combatants may access the Black Sea, or warships may enter but "shall not exceed 15,000 tons."<sup>207</sup> This means that the United States could convert merchant ships, without restriction, and commission them on established trade routes to Ukraine to deliver oil or natural gas, while also implanting electromagnetic warfare capabilities into the Black Sea. It also means that the United States could increase the number of TLAMs in the Black Sea by utilizing small combatants, such as the corvette, to target S-300 and S-400 sites, and other targets of interest.

Eighth, the United States could benefit from distributed basing. Smaller combatants have a variety of benefits. They are able to base in areas where larger deep draft blue-water vessels cannot. Smaller vessels can also provide the functions of anti-piracy and security at less cost. The United States could partner with allies for port access and hotel services

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<sup>205</sup> Boulegue, *Russia's Military Posture in the Arctic: Managing Hard Power in a 'Low Tension' Environment*, 2-3.

<sup>206</sup> "1936 Convention Regarding the Regime of the Straits," Centre for International Law, <https://cil.nus.edu.sg/wp-content/uploads/2019/02/1936-Convention-Regarding-the-Regime-of-the-Straits-1.pdf>.

<sup>207</sup> Centre for International Law.

in the areas of the Arctic, the North Sea, the Baltic Sea, throughout the Mediterranean and in the Aegean to provide port access to U.S. naval vessels. Operating units in these areas would further distribute the fleet so that it cannot also be easily targeted while in port. Another benefit to being disbursed is that these vessels could also engage in security operations in exchange for hotel services. These smaller combatants could engage in anti-piracy operations, freeing up DDGs and CGs for heavier, more vital, missions. Additionally, distribution of these forces also disperses them as a “fishing net” of sensors, so to speak. In short, distributed basing will be a tool to boost international cooperation, providing a capability (security) that some host nations need in exchange for pier services, while also expanding the U.S. Navy’s footprint. Further distribution prevents the buildup of naval forces in a single location and further disburses its sensors as a “cast net” in a particular geographic location, thus creating a more difficult operational environment for Russian naval forces. Finally, it prevents expensive blue-water assets from being caught up in unnecessary anti-piracy engagements which can be handled by smaller naval vessels.

Ninth, smaller vessels may be more agile in the Arctic environment. The Arctic is problematic for deeper draft vessels ten months of the year; however, smaller combatants which can operate closer to land may be able to maneuver the Arctic waters with more ease. However, the United States may find it more beneficial to deploy submarines for unrestricted submarine warfare and to target national assets, such as natural gas and oil platforms.

Finally, the U.S. Navy should adapt the United States Air Force’s CHAMP missile technology for use in over the horizon ship on ship and ship to shore targeting. The CHAMP can deliver “high-powered microwave signals [that] are effective at disrupting and possibly disabling electronics circuits.”<sup>208</sup> This would be advantageous at sea because it would soft-kill surface vessels and render them virtually dead in the water, or blind (no radar). Surface vessels may suffer a loss of communications, GPS, and a major degradation to their combat systems and the loss of vital sensors, like navigation and fire control radars.

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<sup>208</sup> Dave Majumdar, “The Air Force is Developing An ‘EMP Missile’ To Fry North Korea’s Nukes,” *Task and Purpose* (blog), December 13, 2017, <https://taskandpurpose.com/air-force-champ-emp-missile>;

As previously mentioned, the missiles' shore capability could deliver soft kills to infrastructure, command centers, and other vital equipment, like the S-300 and S-400 systems. The U.S. Navy should capitalize on the CHAMP missile, integrate it into the Navy's ecosystem, and distribute it via smaller combatants.

#### **E. FINAL THOUGHTS**

Two final thoughts are simply ideas. In combatting or defending against hypersonic weapons, disruption is crucial. This disruption should manifest itself in two ways: electromagnetic pulses and the disruption of a medium. It will be critical for the United States to detect the hypersonic missiles and vehicles at launch, while in flight, and to prosecute them as early as possible. This is difficult with hypersonic weapons given their relatively short flight time. For this reason, the United States could harness directional EMP technologies. Flight paths of hypersonic weapons should be relatively predictable until their terminal phase, and EMP waves, like all wave forms, spread outward from their point of origination. Hypersonic weapons should be vulnerable at launch and tip-over, just before transitioning to their hypersonic glide. At these times, the weapon's flight path should possess the least amount of maneuvering. During its glide phase, it should be possible to predict a sector in which the weapon will perform its glide or maneuver and therefore be possible to execute with a steerable EMP with a decently sized swath. Thus, it is plausible that the United States could go active with EMP in sectors down the weapon's threat axis. Additionally, but likely more difficult to accomplish, the United States should use airburst capable missiles to disrupt the airflow and flight path of hypersonic weapons. Air (the medium) disruption could kill the weapon's scramjet, or ramjet, propulsion system resulting in a loss of propulsion, or make the vehicle unstable in flight, knocking it off its intended flight path. Because it travels at a high rate of speed, retargeting would be difficult or impossible for the hypersonic vehicle. The problem with such a system would be in creating a large enough airburst to compensate for miscalculations or other errors, and the ability for the airburst projectile to be launched from a ship's VLS cell. This may be more probable close-in; however, would be least effective if encountering numerous hypersonic threats.



Second, in combating surface vessels, the United States could develop a new sea-skimming missile based on the TLAM, or a smaller cruise missile, with stealth technologies. The missile's terminal phase would not include targeting the superstructure of a ship. Instead, in terminal phase the missile could forward project the movement of the ship being targeted and initiate a dive below the water's surface to detonate to within 50yds of the ship. The purpose is to create a super-heated gaseous bubble resulting in cavitation below or near the ship causing the vessel significant damage or disability. Stealth and its sea-skimming flight path would limit its ability to be tracked by radar. This missile being based on the TLAM could provide an extended reach capability.

## **F. CONCLUSION**

In conclusion, the Russian Federation will not be successful at fully implementing its stated naval policy. It will not produce Gorshkov's navy, but it may produce a navy like Stalin's. Russian fleet construction will not produce the blue-water fleet it desires but will instead comprise smaller green-water vessels. However, the Russian Federation should not be understated or marginalized, as it has been; It will be an able naval adversary. The Russian Federation does possess a blue-water capability and will continue to do so; however, the Russian Federation will leverage its missile capabilities (especially by employing them onboard surface ships), conventional and nuclear, and submarine forces to heavily deter adversary forces. The United States needs to adapt and do so quickly. The United States will need to establish a presence in the Baltic Sea, the Black Sea, in northern waters, including the Norwegian and Bering Sea, and in greater strength than it currently does. The naval strategy of the United States should become a comprehensive strategy, like that proposed by Hughes and his team at the Naval Postgraduate School. If the United States pursues the FFG(X) as its new littoral ship, it must also find a cheaper alternative to complete this strategy and further distribute its green fleet. FFG(X) alone has a cost too great to provide the navy the United States needs. Finally, it is important to note that this same fleet construct can be leveraged against China, who currently boasts similar technologies and a growing fleet. The Chinese are developing blue-water capabilities, and currently have an economy and infrastructure that better supports that development, but what is significant is that this same green-water concept can similarly penetrate Chinese

defense capabilities and its coastal environment.<sup>209</sup> The United States should not do as they have done for the past forty years, ignoring the development of Russian and Chinese disruptive innovations while clinging to its sustaining innovations—the carrier and the DDG. The United States must adapt.

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<sup>209</sup> Stephen Biddle and Ivan Oelrich, “Future Warfare in the Western Pacific: Chinese Antiaccess/Area Denial, U.S. AirSea Battle, and Command of the Commons in East Asia,” *International Security* 41, no. 1 (2016): 7–48, <https://muse.jhu.edu/article/628475>.

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